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ABSTRACT

This unit of the Flexible Learning System (FLS) is designed to help adults who work with chilren aged 4-8 clarify and develop their own educational philosophy and its implications for teaching practices in early childhood education. The unit is centered around the analysis of four early childhood education models representing a broad range of contemporary education practices: The Responsive Model; The Open Education Model; The Behavior Analysis Model; and The Engelmann-Becker Model. The unit is designed to be used in conjunction with the EPIE Information Unit, Early Childhood Programs, an audiovisual print package; an overview of the four models is available separately. Learning activities include reading, group discussions, presentations, viewing film strips, observing early childhood programs, and developing and participating in activities. Unit activities are designed to provide information about model programs in early childhood education; clarification of personal values/goals/priorities in working with children; and articulation of a personal model of early childhood education. (Author/SB)

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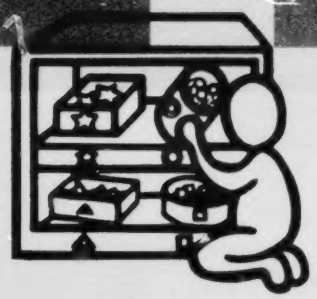

an introduction to early childhood education

2

Introduction to Early Childhood Education

Analyzing Models to Develop a Personal Program

by

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The filmstrips and audiotape recordings used in this learning unit are available as EPIE Information Unit: Early Childhood Programs. The kit was developed and copyrighted in 1973 by the Far West Laboratory, and is distributed by EPIE Institute, 463 West Street, New York City, New York 10014. The scripts of Accompanying Commentaries for the Introductory Briefing (pp. 23-25) and for the four models (pp. 50-51, 62-64, 78-80, 92-94) have been reprinted from the Resource Manual and Program Descriptions of the EPIE Early Childhood Information Unit. The summaries of the four model programs (pp. 52-57, 65-73, 81-87, 95-101) are adaptations of the program descriptions in the Resource Manual and Program Descriptions of the EPIE Early Childhood Information Unit.

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INTRODUCTION TO THE UNIT

Overview. The purpose of this unit is to provide information and guided experiences which will enable you, the learner, to become competent at constructing a personal model of early childhood education for application in your own classroom setting. We hope that the development of your own "working theory" will be of practical value to you in planning conducting, evaluating, and explaining your program.

The method we have chosen as a framework for the development of your personal model program is two-fold: (1) You will have the opportunity to participate in activities designed to improve your skills of program analysis through studying and trying out selected Model programs of Early Childhood Education. (2) You will have the opportunity to participate in activities designed to increase your awareness of your own goals and methods.

What you will be able to do. At the completion of your work with this competency unit you will have had the chance to acquire the following competencies:

- Knowledge of Four Model Programs of Early Childhood Education
- Clarification of Personal values/goals/priorities in working with children
- Articulation of Personal Model of Early Childhood Education

Learning Activities. The activities you will be doing in this learning unit include:

A. Readings from this manual

B. Individual work sheets in Manual

C. Group Discussions

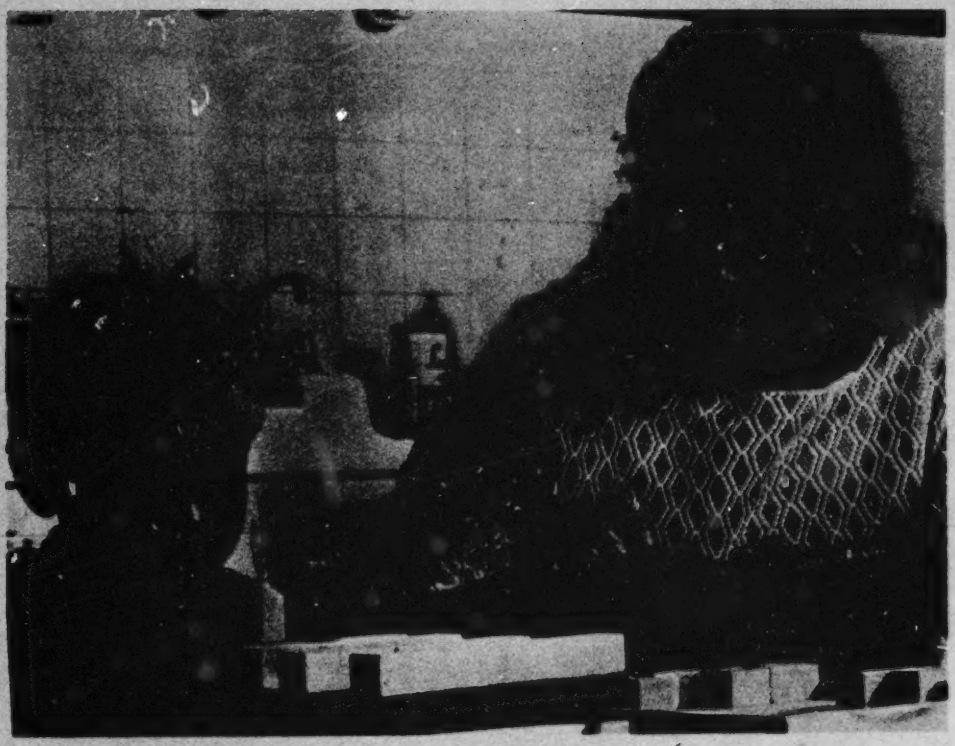
D. Group presentations of Model programs

E. Participation in activities designed by group members

F. Viewing of film strips

Introduction to the Process

Session I



"Skill to do comes of doing"

-Ralph Waldo Emerson

Activity I

A. Introductory dyad: "I really like what I did..."

Choose a partner from the group. Take turns introducing yourselves. Tell that person about yourself. What is satisfying to you as a teacher? Describe your program. What do you like about it? Why?

Tell that person one thing that you did in your last week's work with children that was really satisfying.

B. Group Introductions:

Introduce your partner to the group. Please share with the group what you now know about something your partner values in Early Childhood Education. Ask your partner to feel free to make comments.

Activity II

A. Name five things you do with children that you really like.

B. Check whether they are individual or group activities; whether other people in your program consider these activities valuable; whether they are expensive to do; when was the last time you did them?

Five things I like to do with children	INDIVIDUAL OR GROUP	AGREE?	$	WHEN
1.				
2.				
3.				
4.				
5.				

C. Look at your list again. Do you want to share with the group anything you now notice about the things you listed?

Activity III

A. List five or six things that you think are important about the ways children grow and develop.

B. Which ones of the things listed above are important to you in your role as a teacher? Explain.

Activity IV

A. Noticing Individual Differences:

Think of two children in your class. In what ways are they the same and/or different?

CHILD'S NAME: _____ CHILD'S NAME: _____

Ways they are the same:

Ways they are different:

Anything else?

B. Group Discussion of Aspects of Development:

Share your list with the group. Children develop in many different ways, and at different rates. What aspects of development did your group notice in comparing individual children? What other aspects of development can you think of? Use this page for taking notes from the group's discussion.

C. Aspects of Development that are important to me:

Using your notes from the group discussion as a resource, decide what aspects of development you want to be concerned with in your pre-school program.

Principles of Development

Child Development is the study of how people grow. There are some basic principles of development that you can observe in your interactions with children. These generalizations are basic to child development theory.

On the next two pages are listed some ideas for meditation. These pages are not meant to be read like a story or a novel - straight through from beginning to end. To make your best use of these ideas, requires that you take some time with each one - read it, think about what it means to you, float back into your memory and find an example or two, think about how you agree or disagree, go back and read it again, then go on to the next one.

What are four basic principles of development?

1. Maturation prepares one to profit from experience. By maturation we mean the ripening or working out of the structure of the organism. For example, biological maturation is that process through which we see children grow bigger. Experience is the living through of an event or events, the interaction with oneself and with the world. To profit from experience is to become enhanced simply by the process of living.

2. All aspects of development interact. To develop means to become gradually fuller, larger, better; to unfold; to elaborate; to reveal, disclose and evolve. In development each part of growth depends on others. For example, language doesn't develop unless the appropriate physical structures (e.g. muscles and nerves) have evolved; likewise, cultural background defines what language will develop.

3. Certain times in life are formative. We observe this principle in children as they begin to walk, to speak, to trust, to become independent of adults. Walking at one, talking at two; what stages are your children in? What can they do now that they were unable to do last year?

4. Learning is cumulative. Today's learning forms the basis for what can be learned tomorrow. A child's earliest learning comes from his senses. For example, seeing leads to looking for, hearing to listening for. A child uses what he already has as readiness to learn something new.

What are three possible explanations of how children learn?

Modeling: Children learn by imitation. What you do they will do. What other people (adults and children) around them do the children will do. How can you take advantage of this phenomenon?

Reinforcement: Whenever behavior is acknowledged positively, it tends to increase. What do you know about negative reinforcement?

Trial and Error: The experimental approach is the cornerstone of western civilization. What feedback does a child need to learn from his experience? Imagine a child engaged in activity.

What are some of the skills and attitudes that children learn in school?

SOCIALLY--to be cooperative or competitive;
what else?

EMOTIONALLY--that school is a good place to be; that the teacher is your friend;
what else?

COGNITIVELY--to recall, to reason, to solve problems;
what else?

Personal Work Sheet

This learning unit focuses on clarifying values and setting goals for programs of early childhood education. However, before going any further, let's stop for a minute and think about you, the teacher, and your own values and goals. This page is for your personal use.

My own goals/purposes/fantasies for my own future
in Early Childhood Education:

Next month:

In one year:

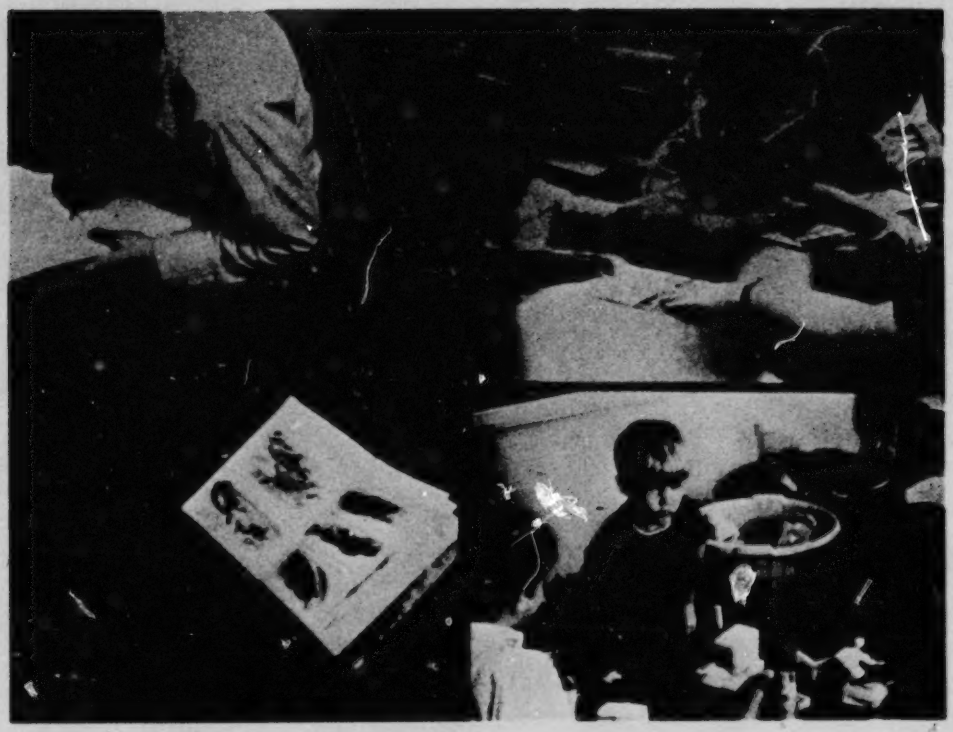
In five years:

Daily Activity Schedule

Please write the approximate schedule that you follow in your classroom. When do the children arrive? When do they have a snack or a meal? Are there regular activity periods? When does the program end?

Time	Activity

Session II



You have already taken several steps toward clarifying your personal values for early childhood education. During the last session you shared a favorite experience with a partner, you made a list of five favorite activities, you decided on which aspects of children's development you think are important. Between sessions you had a chance to think and write about your hopes for your own future in Early Childhood Education.

In this session you will further clarify the values which underlie your program of early education. You will also participate in an introductory briefing to the goals of a few Model Programs developed during the late 1960's.

Activity I

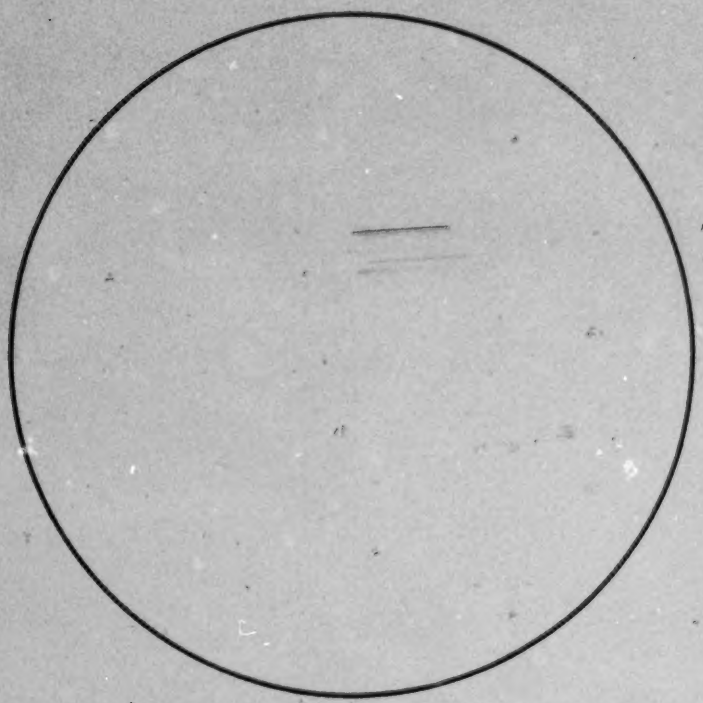
Thinking Ahead: What should a 5 year old know or be able to do in order to have a good time in school? Why is it important for children to learn before they start to school? List as many factors as you can.

Now take your list and rank the factors in priority from most important to least important. Start by finding your number one important factor, and write "1" next to it.

Activity II: Pie of Time

Look at the Daily Activity Schedule for your classroom. How many separate types of activity did you note?

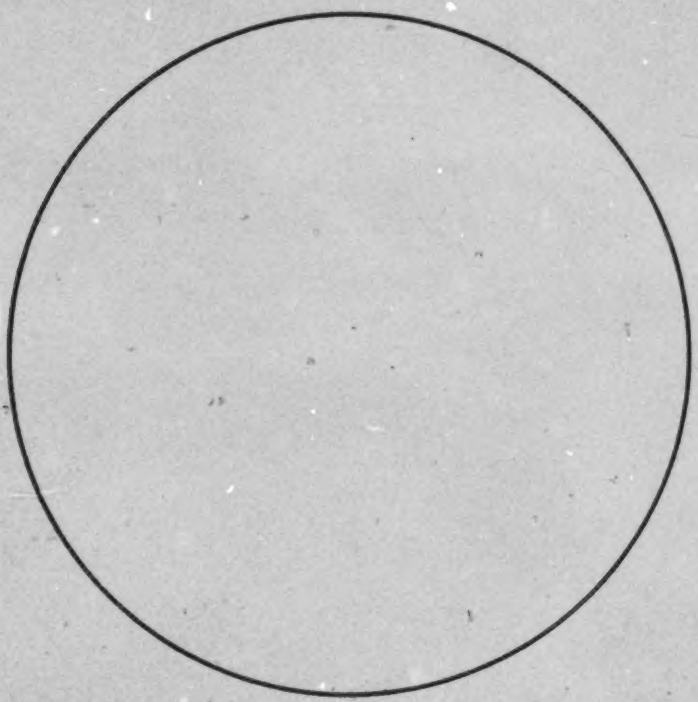
A. Children's time. Divide your circle into areas representing the amount of time your children spend in each activity or area, e.g., indoors, free play, snack, working individually.



What do you think about how the time goes in your program?

B. Teacher's time

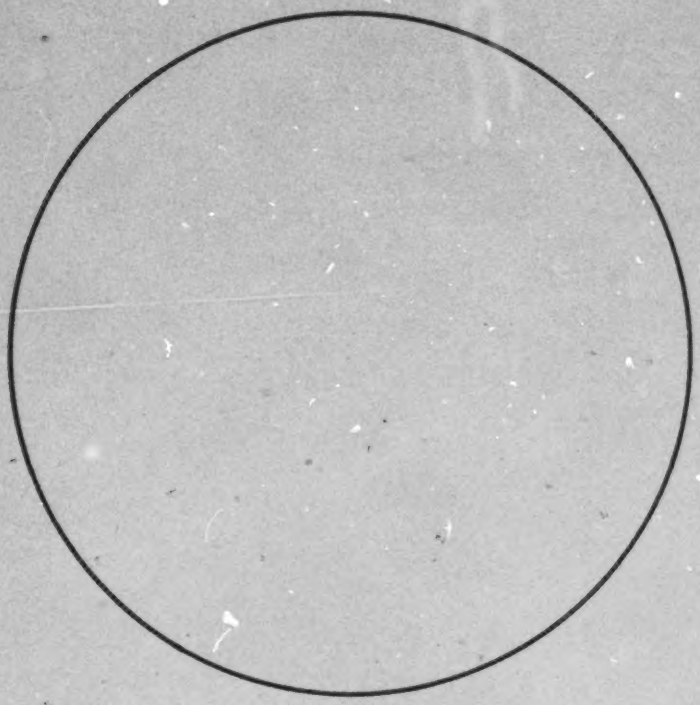
Now divide this circle into areas representing the amount of time you spend at different types of activities (e.g., preparing activities, presenting activities, working with individual children, cleaning up, thinking about the children).



How do you feel about the way you spend your time?

C. Ideal time for your children

How would you set up a "pie of time" to give space to the aspects of development that are important to you?



Is this "pie" different from the one you are now using? If so, in what ways?

Activity III: Introductory Briefing to the Program Models

During the next six sessions you will be developing your personal model of early childhood education as you study four Model Programs. As an introduction to the Model Programs, today you will have a chance to see and hear the film strip and audiotape recording which serve as an Introductory Briefing to the Model Programs. Notice the different ways that these Models set and implement their program goals. In what ways are the Models similar to one another? How do they differ?

On the next three pages is a transcript of the Introductory Briefing. You may want to refer to the script during your group discussion.

INTRODUCTORY BRIEFING

Filmstrip Frame No.	Accompanying Commentary
1.	(Title Frame)
2.	
3.	(Clapping)
4.	(B. Dunning) Yes, Roger; would you like to read that word too?
5.	Different classrooms.
6.	Different ways of teaching.
7.	Different beliefs about how young children learn and what they ought to learn.
8.	Experts do not agree that there is one best way to teach young children. There are at least eight different programs for teaching children between the ages of three and eight that are being used in different places right now.
9.	Since experts do not agree on a best way of teaching, parents and educators can help choose an early childhood program for their own schools or communities.
10.	Choosing can be a difficult and confusing task. This filmstrip will try to help by showing you some ways to compare the programs.
11.	It will point out some of the things they have in common.
12.	It will also try to show how they are different. Some of the differences may help you decide which programs you would like to know more about.
13.	All eight programs have been approved and used by Head Start and Follow Through projects funded by the federal government.
14.	All eight share certain ideas - for example: the people who developed them all disagree with the old theory that education is harmful until children are "ready."
15.	They believe that children may be ready for more than we have imagined if we know how to teach them.

16. Furthermore, they agree, it is exactly these early years that are the most important for learning the skills and attitudes that affect the rest of the child's life.

17. All the programs recognize the importance of the child's home life and heritage. They try to build upon it, not go against it.

18. All the programs try to begin from where the child is when he comes into the program and to let him work at his own pace.

19. All the programs believe that schools should help a child feel successful, and that no child should be made to feel he is a failure.

20. Finally, all the programs teach the basic skills they think a child will need to do well in school and later life.

21. At this point, however, differences begin to show up. Let's look at some of the differences now.

22. This class concentrates on specific skills and attitudes that children need to succeed in later grades.

23. On the other hand, for this class, "skills and attitudes" means more than future school success. Promoting the total well being of the child is considered an important part of the program, too. Here, the teacher tries to help the child learn to be cooperative, curious, creative, and independent.

24. Here is another difference. Some programs have a set pattern for teaching lessons in a certain order. The child must learn to do one task before he goes on to a more difficult one.

25. This program does not set down a special order for teaching and learning skills.

26. Teachers in this program believe it is more important to let the child develop his own way of learning.

27. How much choice a child has within the program is a related difference. In this classroom the teacher chooses and directs the activities, even though it is done on the basis of each child's individual ability and rate of progress.

28. In this program, the child can choose among activities offered by the teacher or plan a learning activity of his own, following his own interests.

29. The use of rewards is a difference among programs. This program believes that the excitement of learning a task is reward in itself.

30. In this class it is believed that at first young children need concrete rewards, such as extra recess, candy, or these tokens which can be traded for games at playtime. Only later will he find learning enjoyable for its own sake.

31. Programs fall roughly into two groups. Programs in the first group tend to emphasize skills and attitudes for success in school. Usually there is a set order for learning these skills: the teacher closely directs the classroom activities; and very often the children are directly rewarded (with candy or tokens) for good classroom behavior.

32. Programs in the second group not only teach skills and attitudes for success in school but also consider the total well being of the child to be an important part of the program. The programs do not necessarily have a set order for learning skills: children have more choice among learning activities and learning is considered its own reward.

33. Some programs have features of both groups, and it is difficult to place them into one or another.

34. As you review different programs we hope you will begin to see the differences that will help you make a good decision about which program or combination of programs will be best for your children. There is, however, no clear proof about which one works best...

35. This has been a presentation of the Far West Laboratory for Educational Research and Development.

(Beep)
(Beep)

Activity IV: Setting Goals

A. Interview Triad. This activity needs three people in a group. Find a comfortable place to get together with two other people. Bring your manuals and a pencil or pen. You will take turns doing the following:

Person 1: Interview and ask questions;

Person 2: Answer questions generating as many goals as possible;

Person 3: Take notes for Person 2.

Interview Questions

What would it take for you to know your program is a success?

What else?

What would a good program be for you?

What else?

What would you look for to know your program is working?

What else?

Ideally, what would a child be like if your program were working perfectly?

What else?

What would a good program have that a bad program wouldn't have?

What else?

B. Program goals that are important to me.

This page is for your own use in considering the notes taken of your interview.

C. Assessment Methods:

Select one of the goals you have listed on the previous page. Think about how you would know whether you achieved that goal. Here are some questions for you to consider.

How long would it take to find out if your goal was accomplished?

What records would you want to keep?

What situations would you need to observe?

How often would you make your observations?

Which children would be involved?

What kind of help would you need?

Who would you like to have help you?

Would you need any special materials?

What else can you think of?

Describe the method you have chosen to assess whether you have achieved your goal:

Historical Overview

Early childhood education has a rich and varied history based on the committed efforts of hundreds of individuals to increase their understanding of children and their skills at caring for and working with young children.

Early in the 19th Century, a German pioneer in early education, Frederick Froebel, first conceptualized the idea of a kindergarten where children could play under the guidance of a trained adult. By the beginning of the 20th Century this idea had spread throughout the United States, and the "Kindergarten movement" had established classes for children of less than school age. Many states began incorporating Kindergartens into their public school systems but only included a one year age span.

In the second quarter of the century the "nursery school movement" initiated programs for children less than Kindergarten age. It was hoped that children could be guided toward healthy personalities through interactions with other children their own age. Many of these programs were set up at universities and continue today as child study programs where educators and psychologists work at identifying developmental differences in children's personalities and capabilities. About the same time, parent cooperatives were set up in various communities. Parents participated with their own children under the direction of trained parent educators.

During the second world war, many women joined the work force for the first time. Day care centers were established to provide care for the children of mothers who were often at work for many hours of the day. These centers met children's need for food, sleep, exercise, and play. Although the major function of these centers was custodial, most of them also attempted to provide age-appropriate activities for the children.

During the 1960's a new national effort was directed against the poverty of large numbers of Americans. One direction of this effort was an attempt to break the "cycle of poverty" through intervention in the lives of children before they entered school. Thus, the primary purpose of Project Head Start, and later Project Follow-Through, was to provide all children with equal opportunity to achieve later success in school.

Early childhood education continues to include programs which represent many different purposes. Many people are interested in Early Childhood Education today. Some of them are interested because they want to have jobs in day care or Head Start or other programs for very young children. Others are interested because they believe that these programs are especially helpful for low-income children from ethnic minority groups. Still others are interested because they think that the experiences offered to children in these programs will help children solve problems, learn to think more clearly, or be more successful when they enter school. Some people are interested because they need a place for their children to stay while they work to earn enough money to support themselves and their families. And others are interested because Early Childhood Education has usally been willing to make changes in the learning environment rather than to place blame on learners who encounter educational difficulties.

There is not "one right way" in early childhood education. Over the years, programs have developed to meet the particular needs of the times. Today, children, families, and teachers are very different in each community. They have different needs, and they have different values. Early childhood educators have a rich heritage to use as a resource in meeting the many challenges of understanding and working with the young children placed in their care.

Four Models

During the early days of Project Head Start an effort was made to incorporate the best ideas and techniques of many years of teaching young children. A number of early childhood program models were designed to represent highly divergent views of what "should be" in early education. We have selected four models which illustrate a variety of different ways of viewing children, and different ways of providing a learning environment. No one of them is "right" or "wrong". Each one has something of value to offer teachers and children in early childhood education.

On the following pages are four brief summaries of each of the Models, please study them and decide which one you would like to learn more about. Please indicate your choices (use "1" for first choice) by putting a number next to each model.

_____ The Engelmann-Becker Model

_____ The Open Education Model

_____ The Behavior Analysis Model

_____ The Responsive Education Model

You will be asked to join with the other members of your workshop group who are interested in the same model to prepare a one-hour presentation about the model you have chosen.

Summary of the Engelmann-Becker Model

The Engelmann-Becker model, named after its developers, Siegfried Engelmann and Wesley Becker, is designed to develop skills in reading, language, and arithmetic for children from preschool through the third grade. By placing the attention on skill development in academic subjects at an early age, the developers feel that failure in later grades can be warded off.

A complete curriculum in each subject (reading, language, and arithmetic) has been developed. These materials, called Distar, break down skills into small learning steps, in order from easy to more difficult tasks. Frequent testing pinpoints the level of performance of each child and allows the child to progress at his/her own rate.

In a typical Distar lesson, the teacher or aide instructs a group of five or six children who are grouped according to ability. The teaching method can be described as highly paced and structured, needing many answers from the child and much support from the teacher.

The Engelmann-Becker approach has been tested with preschool children over a period of several years. The evaluation studies show that children make important gains in intelligence and achievement scores after one year in the program and that these gains are kept through kindergarten.

Summary of the Open Education Model

The Education Development Center (EDC) in Newton, Massachusetts, has advocated an Open Education approach to early childhood education, based on the practices of British Infant schools. EDC takes an advisory role to help individual schools design a classroom environment that responds to the needs of children and to the talents of teachers. Thus, classes under this program may be very different from each other.

The Open Education Model centers on realizing the potential of the "whole child" -- namely, his social/affective development as well as academic/cognitive growth. The classroom has a variety of commercial and teacher- or student-made instructional materials that stimulate student exploration and discovery. Activities are started by the child according to his own interests, and he may explore them as deeply as he wishes and for as long as he wishes. There are no strict separations among subject matters or set time schedules. Since EDC does not prescribe a planned curriculum, the success of the program depends largely on teacher competency and creativity.

The Open Education Model evolved over a period of twenty-five years in the British Infant school system. Seeing the success of the approach in England, EDC has sponsored it for use in preschool through third grade classes in the United States. Both EDC and British Infant school spokesmen have expressed distaste for the most frequently used evaluation procedures, such as grading and standardized tests. They feel that these measures and procedures fail to reflect adequately what the program is attempting to do. They propose more informal teacher-made evaluation measures, such as observation check lists and diary-type records.

Summary of the Behavior Analysis Model

The Behavior Analysis Model, developed by Don Bushell, Jr., at the University of Kansas, is an early education program for children from preschool through the third grade. Bushell feels that failure in later grades can be warded off by teaching children at an early age those skills and behaviors that are required for success in school.

The program recommends commercially available programmed materials for teaching skills such as reading, arithmetic, spelling, and handwriting. It also recommends teaching desirable classroom behaviors such as completing tasks, paying attention, working independently. To achieve these objectives, the teaching method focuses on those aspects of children's behavior or performance that can be measured. The program diagnoses each child's level of functioning (where s/he is), determines terminal objectives (where s/he should be), and proceeds to bring the child from where s/he is to where s/he should be.

The distinctive feature of the program is its use of reinforcement or rewards. Children earn tokens (plastic chips) frequently and immediately for small accomplishments. Later in the day, the chips can be exchanged for a reward that each child choses. The type of reward used differs from child to child -- free time may be rewarding for one child and a special game for another.

The Behavior Analysis approach is an outgrowth of the research discipline of experimental psychology known as the Experimental Analysis of Behavior. Bushell maintains that direct application of the approach in a variety of teaching and training situations has been made and that the effectiveness of the approach has been well documented.

Summary of the Responsive Model

The Responsive Model, a preschool through third grade program, is based on the belief that the development of intellectual abilities and a positive self-image are necessary in preparing children for success in school and later in life.

To achieve these objectives, the developer of the model, Glen Nimnicht of the Far West Laboratory for Educational Research and Development, designed a learning environment that responds to the needs and interests of children. Activities in the Responsive Model are undertaken for their own rewards. Children are free to explore activities, work at their own pace, and make discoveries under the guidance of the teaching staff. In addition, children are informed immediately of the results of their actions.

The classroom is equipped with a large variety of "responsive" toys and materials. That is, toys and materials have self-correcting features so that children will know immediately whether they are right or wrong. A list of recommended and optional materials is provided by the developer.

Many evaluation studies have been done to measure the success of model. Some of these studies were by independent school districts using the Responsive Model. Others are conducted by the developer to measure the effectiveness of various aspects of the program. These studies tend to show positive improvement on measures of intelligence, achievement, and self-concept.

Preparation for Presentation

Session III

This session begins the investigation of four model programs of early childhood education. The purpose of studying various programs is to assist teachers to clarify their personal values. What do you value in your interactions with children? What is important to you in structuring an educational environment?

During this session your preparations for a team presentation should include the following:

1. Study the Model Program (filmstrip, cassette, script, description).
2. Discuss the Model Program.
3. Plan your team presentation (discussion questions, activities, summary).
4. Write down your final decisions for presentation.

Session Four will be a Workshop when you will have the opportunity to rehearse your presentation.

Here are some suggestions for learning about the model program which you have selected:

Get together with your Presentation Team (the other members of your workshop group who have chosen to investigate the same model program).

Turn to the Session for the program model which you have selected, and review the printed material which describes the Model Program.

Take the filmstrip and cassette for your selected unit plus the necessary equipment, and go to a place where the team may work undisturbed and without disturbing. View the filmstrip and listen to the cassette.

Here are some questions you might consider in your team discussion about your Model Program.

Does the filmstrip and cassette seem to give the same message as the written description?

What are program goals?

What are the learning objectives?

What do the children learn?

How do the children learn?

What role did the teacher play?

What role did the parent play?

As soon as your team has developed an initial understanding of the model, you can begin to plan how you would like to present the model to the rest of the class. See how imaginative and creative you can be in designing your presentation!

On the next two pages you will find some discussion questions, and activities. Decide, as a team, if you would like to use any of these suggestions. What else would you like to include in your presentation?

Suggested Discussion Questions for Presentations:

A. What did you like about the model? Why?

What did you not like about the model? Why?

Does the program support or interpret correctly what you know about child development?

What aspects of the progr[illegible] reflect what you already do? What you would like to do?

What specific things about the program make you uncomfortable?

What parts or aspects of it would you use in creating your personal model?

B. What does this model say about how children learn?

How is the child's self-concept supported?

How is cognitive development enchanced?

How is social development enhanced?

What is the teacher's role vis-a-vis: Children? Staff? Parents?

What is the relative importance of the teacher vs. the materials?

What is the role of other staff?

What is the role of parents?

How is time used in this setting?

C. What would it take for the designers of the model to know their program is successful?

What would it take to improve this model?

D. What other discussion questions can you think of?

Suggested Activities for Presentations:

1. Generate a lesson plan for an activity that reflects the theory of this model. Specify:

   Name of program model
   Type of activity
   Objectives(concepts, skills, experiences)
   Procedures
   Materials
   Assessment methods

2. Hold a debate of the value of various aspects of the program.

3. Bring in materials and role play a teacher-child or child-child interaction as it might occur in the model program.

4. Record an observation of a child in your class as a teacher might in the model program.

5. Fill out the Summary Sheet and give it to the trainer for reproduction. It will allow each group member to have a record of your findings and conclusions and can be used during your discussion.

6. What other activities can you think of?

Summary of _____ Model of Early Childhood Education

Presentation Team _____ Today's Date _____

Learning Objectives	How are Children Expected to Learn	Role of Teacher	Role of Parents	Assessment Methods

What do I/we think children learn in this Model Program? _____

After your team has discussed ideas on how best to present this program, one of you should write down your final decisions for presentation. Make sure all team members have this information and understand it.

What role will each team member play?

What materials are available for use?

What do we need?

How will we introduce the model?

What activities will we include in our presentation?

How will we end our presentation?

Other decisions?

Now if there is time you may want to rehearse; or your team may wish to meet between sessions for rehearsals. Whatever you do, be sure to have a good time. You should make your experience of learning as fun as you would like it to be for children.

Workshop

Session IV

By now your team should be well on its way to planning a presentation of one of the four Model programs. This session will give you the opportunity to finish your preparations and have a rehearsal of your presentation.

Session V

Agenda

esentation by analysis group

Discussion

Any follow-up activities

The only writing you need do in this session is to complete the Summary Sheet. This will assist you in articulating your personal model at the end of the course.

THE ENGELMANN-BECKER MODEL

Filmstrip Frame No.	Accompanying Commentary
1.	(Title Frame)
2.	
3.	
4.	These children are in a first grade class using the Engelmann-Becker Model. They are learning basic skills in reading, language, and arithmetic.
5.	The Engelmann-Becker Model is designed to prevent failure in the upper grades by equipping young children with the fundamental skills of academic subjects.
6.	The developers of the model have designed a complete curriculum for reading, language, and arithmetic called Distar.
7.	The Distar materials teach skills in a carefully planned sequence of small, easy steps. These materials include built-in tests which allow teachers to keep abreast of each child's progress.
8.	This class is divided into three or more performance groups. While one group studies reading, another studies language, and the third arithmetic. Each group is taught behind a partition.
9.	The teacher or aide follows a guide that tells her exactly what to do and say at every point.
10.	In the Engelmann-Becker program the children do not just listen to the teacher, they are actively involved. At times they chant or even shout their answers, although loudness is not a necessary feature of children's responses.
11.	In the reading groups today, the children blend sounds to read words.
	(Children reading)
12.	In arithmetic, they add by counting.
	(Children counting)
13.	And by solving problems.
14.	One language lesson teaches the children precise ways to identify objectives.
15.	The Distar materials show the teacher how to keep the children alert and interested.

16. The teacher tries to make the children feel clever and proud of themselves.

17. Along with praise, the teacher rewards the children with "take-home" sheets.

18. Parents can help their children with "take-homes" to follow up on what is taught in the classroom.

19. A program for parents has been developed to train parents in child management skills so that they can more effectively teach their own children at home.

20. The reading, language, and arithmetic instruction requires only about two hours a day. There is time left for other activities. For example; there may be a period when children can select from quiet activities, such as puzzles or table games.

21. There is time for music and art. The developers recommend the use of "Language Concepts in Song" and "Language Concepts in Drawing," both especially designed to support the language program.

22. However, schools using the model may have other music and art activities.

23. In this school, where many children come from Spanish-speaking homes, there is a period for learning songs in Spanish and English.

(Children singing)

24. One teacher and two aides are recommended for each classroom.

25. The developers provide preservice and inservice training for teachers and aides in Head Start and Follow Through Schools using the Engelmann-Becker Model across the country.

26. Distar materials used in this program may be purchased directly from the publisher, Science Research Associates.

27. Science Research Associates also provides training for purchasers of Distar materials.

28. For further information read the program report on the Engelmann-Becker Model.

29. This has been a presentation of the Far West Laboratory for Educational Research and Development.

(Beep)

(Beep)

THE ENGELMANN-BECKER MODEL

Project Directors: Siegfried Engelmann, Wesley Becker

Department of Special Education
University of Oregon, Eugene 97403

SUMMARY

The Engelmann-Becker model, named after its developers, Siegfried Engelmann and Wesley Becker, is designed to develop skills in reading, language, and arithmetic for children from preschool through the third grade. By placing the attention on skill development in academic subjects at an early age, Engelmann and Becker feel that failure in later grades can be warded off.

A complete curriculum in each subject (reading, language, and arithmetic) has been developed. These materials, called Distar, break down skills into small learning steps, in order from easy to more difficult tasks. Frequent testing pinpoints that level of performance for each child and allows him to progress at his own rate.

In a typical Distar lesson, the teacher or aide instructs a group of five or six children who are grouped according to ability. The teaching method can be described as highly paced and structured, needing many answers from the child and much support from the teacher.

The Engelmann-Becker approach has been tested with preschool children over a period of several years. The evaluation studies show children making important gains in intelligence and achievement scores after one year in the program and that these gains are kept through kindergarten.

GOALS AND OBJECTIVES

For whom is the program designed?

The Engelmann-Becker program was designed to be used for the first four or five school years (corresponding to preschool through third grade). However, children are placed in the program according to their use of basic language, reading, and arithmetic skills, not their formal grade in school. The program is a model for Follow Through and Head Start classes. The developer states: "The program is designed to be successful with children from language-handicapped backgrounds." However, the program can be used with any child who does not have the skills taught in the program.

What are the goals and objectives of the program?

The purpose of the program is to help the children get certain skills that will allow them to progress in school and compete successfully with other children.

In reading, the children begin by looking at written symbols (words) and saying the sounds represented by them. They learn to read from left to right and they learn methods of word attack and blending.

In language, children should be able to answer the question, "What is this?" They should learn to use opposites and rational concepts, perform *if-then* decisions, and use *not* and *or* in them.

In arithmetic, the goal is to use problem-solving methods not the memorization of facts. The children learn to count (forwards, backwards, and in groups) and they learn symbols (+,-,=,etc.).

What is the reasoning behind the program?

The developers believe they have seen a self-continuing relationship between education and poverty. Since a poverty-stricken home has not well-enough prepared the child for school, he fails and later drops out. He then moves into semiskilled and unskilled jobs and raises children under the same conditions. So the pattern repeats itself.

Rather than trying to correct the home, the developers have prepared a program to give the students a head start in the language, reading, and mathematics skills needed for the child to compete equally with the rest of the school age children.

The developers stress the importance of keeping the same goals for all students. They feel that it is self-defeating to use a second standard for the poor child, since economic success in adult life is measured by a single set of standards.

As a result, Engelmann and Becker see the preschool not as a supplier of new experiences but as a place where the "disadvantaged child" must learn twice as much to enter the second year on a par with others. The result is a fast and subject focused program using many spoken instructions and exchanges.

CONTENT AND MATERIALS

How is the program to be used?

The Engelmann-Becker language, reading, and arithmetic programs are called "Distar" (published by Science Research Associates). Each Distar program has two levels and each level contains materials enough for one school year of instruction. The total classroom time per day given to all three programs is about two hours.

Two other programs help the Distar language program. They are Language Concepts in Song, and Language Concepts Through Drawing, both published by Instructional Media of America. Together they take about 30-45 minutes of instruction per day.

If wished, any one, any combination of several, or all of the programs can be used.

How is the curriculum organized?

The materials are arranged in order within each of the three subject areas. Each skill is developed as necessary to the next one. The teacher is expected to follow the order carefully.

Whether the students pass on to the next exercise or level is decided by short but frequently given tests. The exact length of time spent on each activity will be different, depending upon the success.

What student materials are provided or suggested?

The materials for each program are boxed separately. The school does not need any other materials or equipment.

"Take-Home" sheets are included in the materials for each Distar program. They are printed with various exercises and pictures related to what the students are studying in class and are intended to be used as rewards, which the teacher gives to individual students for work well done. The Distar reading program and the Distar Arithmetic I program include a workbook for each child.

Materials for Language Concepts through Drawing, published by Instructional Media of America (IMA), consist of two books for each child. Pencils and crayons for drawing and coloring must be supplied by the school. No additional materials are suggested.

Language Concepts in Song, also published by IMA, neither provides nor suggests student materials: none are considered necessary.

What materials are provided or suggested for the teacher?

All directions and materials for teaching Distar are provided. The teacher materials are boxed separately for each program.

Materials provided for the reading program are a teacher's guide and four spiral-bound presentation books (A, B, C, and related skills guide). An acetate page protector, two instructional recordings, and a pronunciation guide are also included.

Materials for the language program include a teacher's guide and eight spiral-bound presentation books (Book A, Parts I and II, Book B, Parts I and II, the Storybook, and the Color Book). An acetate page protector, a set of group process indicators, and three transparencies to use with Level I are also included.

Materials provided for the arithmetic program are a teacher's guide and five spiral-bound books (preskills and presentation books A, B, C, and D), an acetate page protector, form boards, and four decks of geometric figure cards.

For Language Concepts in Song (published by IMA), the materials provided for the teacher include:

30 red records (beginning level)
28 blue records (intermediate level)
28 green records (advanced level)
7 pictures
1 teacher's guide

A teacher's guide is the only necessary teacher material for Language Concepts through Drawing. It is provided by IMA. All 256 drawings are included in the guide. For each there are teaching instructions which tell the teacher 1) which pictures to point to, 2) which details of the pictures the children are to point to, 3) what the children are to draw or color, and 4) what discussion questions to raise on the details of the drawing.

What materials are provided or suggested for student evaluation?

The Distar materials contain tests to be given throughout the program. In addition, two standardized tests are generally given at the end of the school year. They are the Wide Range Achievement Test from the Psychological Corporation and the Slosson Intelligence Test from Slosson Education Publications.

CLASSROOM ACTIVITIES

What is the teaching/learning method?

The Engelmann-Becker teaching method evolved from a belief that teachers should be highly skilled "clinicians" whose responses are "preplanned" and "purposeful." The pace of the program is rapid and the teacher must be thoroughly familiar with the materials. She presents the instructional sequences, responds systematically to all types of answers and actions from the students, and is responsible for rewarding the students for correct performances of specific skills.

Engelmann and Becker believe that the highest level of efficiency in a strong preschool program requires that the teacher exercise tight control in small group situations. They stress the importance of reinforcement in the form of praise and approval for the teacher.

What classroom organization is best suited to this program?

For every class of twenty-five to thirty children, there are one teacher and two aides. Ideally, the children are arranged in groups of three to eight, according to their level of the basic skills. For the Distar lessons they are seated in chairs (not at desks) in a close semicircle around the teacher to be sure that their attention is constantly on her. The teacher makes sure that all of the children in the same small group are progressing together and that no one is left behind or is unable to master the next skill. The semicircle arrangement allows the teacher to be constantly

aware of the progress of each child. If a child in a particular group is always behind, the teacher is likely to move him to a slower group.

PARENT INVOLVEMENT

To what extent are parents involved in the program?

In a number of ways. After preservice training, they may become teacher aides in the classroom. The aide positions provide the necessary instructional support in the classroom and employment opportunites for parents.

Parents also may become involved at home. This is accomplished through "Take-Homes", which are worksheets the children may bring home as rewards for good work at school. Parents are advised to work with their children on the "Take-Homes." A manual with instructions for using "Take-Homes" is available from the developers.

What materials are provided for training parents?

Two pieces of training materials are specifically designed for parents. First, a manual entitled *Home Practice for Parents and Child* is available from the developers. A workbook entitled *Teaching Children-A Child Management Program for Parents* is available, also.

PROFESSIONAL AND PARAPROFESSIONAL TRAINING

What skills or knowledge do teachers require?

In order to implement the program successfully, teachers need to have an understanding of the program thinking and skill in using the program materials. They must be able to manage and organize the class; follow the group and individual instruction offered by the program; and learn such teaching behaviors as praising the children and pacing the presentation. These skills are emphasized during the training workshop.

Are training programs available for professional and paraprofessional training?

The developers provide training for adopters of the model. The publisher, Science Research Associates (SRA), offers training for straight purchasers of Distar.

What materials are available for professional and paraprofessional training?

A training manual is available for the two-day workshop offered by SRA.

PROGRAM DEVELOPMENT AND EVALUATION

What is the research base?

In 1964, Carl Bereiter[1] and Siegfried Engelmann began a program for pre-school children from poor homes and non-white ethnic backgrounds at the University of Illinois. The program was built on three premises:

1. When we speak of education, we must refer to what children are taught, not what they learn.

2. We must have very specific criteria of performance so that we can analyze what children are to be taught.

3. We must recognize that tasks are the same for all children, but that different children may not have learned the same set of skills involved in a particular task; we must define the role of teacher as one who teaches every child all the skills a child must master in order to handle a particular task.

From these premises evolved the theory and rationale for the program described in this report. Believing that schools must set the same set of educational objectives for all children, the developers began to test the techniques they had devised for teaching "competence skills that potentially lead to maximum upward social mobility."

The project has recently moved to the University of Oregon, Eugene, Oregon. General information on the Engelmann-Becker model is available from:

Dr. Jessica H. Daniel
Administrative Director
Engelmann-Becker model
Department of Special Education
University of Oregon
Eugene, Oregon 97403

1. Carl Bereiter and Siegfried Engelmann were co-founders of the program in 1964. It was then called "The Bereiter-Engelmann Program." Dr. Bereiter left the program in 1967, and in the same year Dr. Wesley Becker joined the staff. The program has since then been referred to as "The Engelmann-Becker model."

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Summary of Engelmann Becker Model of Early Childhood Education

Today's Date _____

Presentation Team _____

Learning Objectives	How are Children Expected to Learn	Role of Teacher	Role of Parents	Assessment Methods

What do I/we think children learn in this Model Program? _____

_____

_____

_____

Session VI

Agenda

Presentation by analysis group

Discussion

Any follow-up activities

Be sure to complete the Summary Sheet to assist you in articulating your personal model at the end of the course.

THE OPEN EDUCATION MODEL

Filmstrip Frame No.	Accompanying Commentary
1.	(Title Frame)
2.	
3.	
4.	In an open education classroom like this first grade, children choose their own activities and help to set their own goals. They are free to pursue their interests and work in ways best suited to themselves.
5.	A basic belief behind the open education approach is that play is a child's natural way of learning-that games and activities which grow out of children's interests and surroundings are the most effective way to learn.
6.	The Education Development Center, or EDC, is helping schools develop this kind of Head Start and Follow Through class across the country. EDC provides advisors to help teachers to plan activities, select materials, and manage the classroom.
7.	This model does not tell teachers what to teach or how to teach. EDC advisors help teachers create an open education classroom suited to their own styles and to the needs and interests of the student.
8.	These five- and six-year-olds may choose from a variety of materials the teacher has prepared beforehand. For example, some children are making things with building blocks.
9.	Others make up stories for the teacher to write down. This activity allows them to read what they themselves have written, and copy the teacher's writing.
10.	Some children look at filmstrips or filmloops.
11.	Some read in the library corner.
12.	Some listen to stories and language development records.
13.	Others work at the sand table, talking freely with each other. The developers encourage children to talk together in the belief that the child must be fluent in speaking in order to learn to read well.
14.	Learning is usually informal and unstructured. Teachers help children to discover things on their own and try not to act like a final authority.

15. However, the teacher may schedule special sessions to give certain children intensive help on particular skills such as reading.

16. In the math area, some children work with stacking cubes and worksheets...

17. ...or with colored cubes and Cuisinaire rods. The teacher selects materials that are interesting to children and teach them needed skills and concepts.

18. Some of the children use the new surveyor's wheel to measure the area of the room.

19. They compare their heights by measuring each other.

20. Some of the children will continue the same activity most of the morning. Others will change projects often. Usually a child is allowed to stay with an activity as long as he wishes. Teachers believe that arbitrary time limits harm a child's developing ability to become deeply absorbed in learning.

21. During the morning some of the children take time out for physical education class.

22. In the music class, the children do a great deal of free-form dancing.

23. The teacher's role is not necessarily easier than a traditional one. She must plan activities and select appropriate materials.

24. She must find ways to keep track of each child's progress. In this classroom the children place all their written work in folders.

25. Since each child works at his own pace and there are no formal tests, the teacher develops her own ways to evaluate achievement.

26. Despite the great amount of freedom children have, there are limits. The teacher uses her judgment and does not abdicate her adult responsibility.

27. Aides are a part of the teaching team. They have the same duties as teachers. The program also encourages the use of community volunteers.

28. EDC provides advisors whose job is to help the teacher with curriculum ideas, materials, and problems of managing an open classroom.

29. EDC trains teachers and aides in the Follow Through Model. In workshops teachers sometimes try out activities as children might.

30. An open classroom requires a large variety of materials, many made by either teachers or children. Junk or off things brought from home such as scraps of cloth, metal, lumber, and cardboard are valued as learning materials because they are so close to the child's own life.

31. Although EDC recommends a large number of commercial materials, it believes it is more important that the teacher consider the possibilities of simple, common items like these.

32. EDC supplies teachers in its model with printed suggestions for activities and using materials. A number of documents that describe the open education classroom and how to conduct one may be obtained from EDC by interested schools.

33. Open Education is not a program in the usual sense. EDC did not invent it. The general approach has been used by a number of teachers, especially in British primary schools. EDC's concern is to assist teachers using this open education approach because they believe its success depends on the teacher.

34. For further information, read the program report on the Education Development Center Open Education Model.

35. This has been a presentation of the Far West Laboratory for Educational Research and Development.

(Beep)

(Beep)

THE OPEN EDUCATION MODEL

Project Director: George E. Hein

Education Development Center, 55 Chapel Street,
Newton, Massachusetts 02160

SUMMARY

The Education Development Center (EDC) in Newton, Massachusetts, has advocated an Open Education approach to early childhood education, based on the practices of British infant schools. EDC takes an advisory role, to help individual schools design a classroom environment that is responsive to the needs of children and to the talents of teachers. Thus, classes under this program may be very different from each other.

The Open Education Model is concerned with realizing the potential of the "whole child" -- namely, his social/affective development as well as academic/cognitive growth. Activities are started by the child according to his own interests, and he may explore them as deeply as he wishes and for as long as he wishes. There are no strict separations among subject matters or set time schedules. The classroom has a variety of commerical and teacher- or student-made instructional materials that stimulate student exploration and discovery. Since EDC does not prescribe a planned curriculum, the success of the program depends largely on teacher competency and creativity.

The Open Education Model evolved over a period of twenty-five years in the British infant school system. Seeing the success of the approach in England, EDC has sponsored it for implementation in preschool through third grade classes in the United States. Both EDC and British infant school spokesmen have expressed distaste for the most frequently used evaluation procedures, such as grading and standardized tests. They feel that these measures and procedures fail to reflect adequately what the program is attempting to do. They propose more informal teacher-made evaluation measures, such as observation check lists and diary-type records.

GOALS AND OBJECTIVES

For whom is the program designed?

The Education Development Center (EDC) emphasizes that their Follow Through project is not for any economic, ability, or age group. It is not a compensatory program; rather the developers see it as the way to educate all children. At present the EDC model is used in kindergarten and first- and second-grade Follow Through classes, and in some Head Start classes. The British infant schools (the original model for the EDC Open Education program) include children from ages five to seven. Some British junior schools (ages seven to eleven) also use the approach.

What are the goals and objectives of the program?

The overall goal of the EDC project is to assist schools that wish to try the approach used in innovative British infant schools, among others. (Note: in this report, the term "British infant school" will refer to the innovative schools--approximately one-third of all British infant schools--as the term is commonly used in this country.) The EDC project is not a "model" or a "program," since its aim is to introduce an approach to American schools.

EDC has identified two goals for the assistance it provides to schools:

1. To help schools fashion classroom environments responsive to the individual needs of children as well as to the talents and styles of the teachers.
2. To develop the advisory concept as a way of helping continued growth and change in schools.

The second goal, to develop *the advisory concept,* means that EDC sends out advisory teams to help teachers develop the classroom environment described above. The purpose of the advisors is assistance rather than supervision. Ideally, advisors should offer assistance only at the request of a teacher. Advisors are not expected to evaluate, criticize, or tell the teacher what to do, except at the teacher's request. Their role is to listen to the teacher's needs and problems and assist in whatever way is needed. EDC is committed to the philosophy that the teacher deserves the same respect and freedom she is expected to give her students, that the "open" classroom is only possible with a "free" teacher.

Typically, a variety of activities go on at the same time. Each child works in the way best suited to himself and is free to discuss his work with other children. Cooperation is encouraged. Groupings are flexible and there are "few obvious separations" between subjects. One of the most important characteristics of this classroom to EDC is an abundance of varied physical materials to stimulate exploration and discovery. Most of these materials are noncommerical. Activities arise from interests rather than from a prescribed curriculum. In all of this the teacher is the "catalytic agent," guiding, encouraging, provisioning, and structuring the environment.

EDC does not advocate a totally unstructured environment but rather "patterns of organization" that allow children greater freedom and responsibility than traditional schools, based on the belief that such a classroom environment promotes a high degree of learning. Joseph Featherstone wrote in *The New Republic:* "It is this deep pedagogical seriousness, the attention paid to learning in the classroom, that makes the British primary school revolution so different from progressive education, which was all too often unconcerned with pedagogy."

The instructional objectives "relate to the 'whole child' approach." The project staff has listed the following objectives "relating to the cognitive domain":

1. Improved ability to express thoughts and feelings through spoken and written language

2. Growth of encoding and decoding skills, with particular reference to reading

3. Improved ability to abstract from a variety of experiences, to generalize and form concepts

4. Growth of problem-solving and problem-finding abilities

5. Improved coordination and control of sensory-motor operations, leading to growth of manipulative skills

First among the affective objectives is the development of a self-motivated learner able to start and carry out in-depth learning activities independently. The staff lists these specific objectives in the affective domain:

1. Greater self-awareness and self-control

2. Improvement of the self-image in relation to

   a. problem solving
   b. intergroup relationships

3. Increased levels of aspiration

4. Shift from a need for extrinsic motivation towards intrinsic motivation as a more normal mode

5. Development of positive attitudes toward school

What is the reasoning behind the program?

EDC has elected to promote an American adaptation of the British infant school approach.

In examining factors in the success of the British schools, the staff has identified the role of the advisor as crucial.

The British infant school itself derives from the theories of people such as Froebel, Piaget, and Bruner, although interpreted differently from some other approaches. It is based on the belief that children teach themselves, instead of being taught by adults. The EDC staff uses the illustration of the way children learn to talk and walk by observation and imitation but not by specifically being taught. The approach capitalizes on the child's natural curiosity, which the teacher can stimulate but not create, and that learning grows out of the child's own interest in something when the child needs to learn. Children are encouraged to cooperate, discuss their work with one another, and learn from each other, improve their language skills through conversations with each other. They also say that children learn more easily from one another than from an adult.

CONTENT AND MATERIALS

How is the program designed to be used?

Because the EDC model is an approach rather than a program in the usual sense, there are no restrictions such as the length of time the program should run, etc. The staff states that it is necessary for schools in the United States, if they are to grow, to design their own programs rather than copy British schools.

What skills, concepts, and attitudes are to be learned?

EDC does not specify a body of detailed skills and concepts that each student should acquire. However, EDC does expect that students will develop a variety of skills, including those of reading, writing, and mathematics. EDC is opposed to the idea of a given body of skills and concepts which every student must acquire in the same order or by the same means in order to learn to read, write or think mathematically. Staff members believe that educators have not identified all the paths by which people learn complex skills. (For example, children have been know to learn to read partly by pretending to read with children who can read.)

The EDC approach emphasizes the importance of communication skills and mathematical concepts, as does the British infant school. Communication skills include reading, writing, and oral speech, which "is at least as important as writing and for the majority perhaps more important."

The most important attitude that EDC wishes to develop in children might be summarized as self-reliance. The staff wishes children to become self-motivating, capable of setting their own goals and undertaking work in an individual and independent manner to satisfy their own needs rather than to please a teacher. Part of this attitude is not to fear failures, but to regard them as valuable means of learning.

How is the curriculum organized?

EDC has not developed curriculum materials in the usual sense. Rather the staff has prepared a set of one-sheet curriculum ideas ("ideas in green") as handouts to teachers. These materials are not to be used in any particular sequence, but as the teacher wishes--and if she wishes. EDC is opposed to the idea of a set curriculum or series of learning activities.

What student materials are provided or suggested?

EDC believes that classrooms should be "rich environments" in which children may choose from a great variety of materials. However, they warn that: Materials--"stuff" in the broad sense--acquire value only as they are acted upon by children's and teachers' minds. They do not and cannot teach. Learning arises when children use such materials as aids to intellectual activity and as stimulants to feeling and imagination. Children and adults *invest* the materials with meaning; they literally *invent* multiple meanings, uses, and interpretations. By using their powers of mind and imagination children and teachers work transformations

on inert materials and give them life."

EDC recommends both approaches: a wide variety of materials rather than identical texts for each child, and a creative use of "junk" materials. They state:

> "Open classrooms *can* be successfully operated without *any* commercial materials. The natural materials, homemade materials, "junk" materials mentioned in the list have by far the widest application (you will find them repeated over and over again in almost every section) and are by far the most basic and essential part of the material environment."

EDC also emphasizes the importance of "an abundance of really good books for reference, for enjoyment, for stimulation, both at teacher and student levels." Books are not confined to a "library corner" but are placed almost everywhere a child might happen to be working; by discovering them in many contexts he begins to realize their importance.

What materials are provided or suggested for the teacher?

EDC provides a number of background papers for teachers, including "A Plan for Continuing Growth." They also provide the list of suggested materials (seventy-six pages, naming suppliers and prices).

Advisors provide teachers with one- to three-page papers describing suggested activities. The EDC staff emphasizes that these are meant as suggestions only.

As background reading EDC recommended the following: John Holt's Books (*How Children Learn, How Children Fail, The Underachieving School). The Lives of Children* by George Dennison, Joseph Featherstone's articles on the British infant school in *The New Republic*, and *Communication and Learning in the Primary School* by L. W. Sealy and Vivian Gibbon. They also recommend the so-called Plowden Report, *Children and Their Primary Schools*, a report of the Central Advisory Council for Education (England), 1967 (two volumes).

In addition, the materials list for teachers includes resource books in art, mathematics, and science.

What materials are provided or suggested for student evaluation?

EDC recommends that teachers keep anecdotal records of each child's "total growth." They have prepared a paper entitled "Keeping Track of Children's Growth and Learning: Some Guide Lines and Examples for Teachers." Included in the paper is a reprint from *The Integrated Day in the Primary School* by Mary Brown and Norman Precious, with five studies illustrating good anecdotal record keeping.

CLASSROOM ACTIVITIES

What is the teaching/learning method?

The teaching/learning method is rooted in the idea of the "open classroom," as it is generally called. The open classroom is described as "one which is truly responsive to the needs and interests of children; in which children's learning is deeply rooted in experience; where knowledge becomes important because it applies and is put to use; and where children, in an atmosphere of mutual trust and respect, can carry on with each other and with adults the kind of open exchange that is the essence of good education."

EDC has listed some of the features of the open classroom:

1. There is a rich environment of materials for children to explore, and there are many opportunities for learning through doing.

2. Children's responses to the environment provide many of the starting points for learning. Activities most often arise from the needs and interests of the group. When commercial materials and programs are used, they must be made available in ways that protect the children's responsibility for their own learning.

3. With guidance from the teacher the children plan their own activities, drawing from a range of choices.

4. Each child is free to explore an interest deeply and is also free to stop when an activity no longer seems appropriate.

5. Typically, there is a variety of activities going on at the same time, each child working in ways best suited to his interests, talents, and style.

6. There are few barriers between subjects, and much of the children's work is, in fact, interdisciplinary (covers several subjects).

7. Little time scheduling. A flexible schedule permits children to learn according to their individual rhythms of starting and stopping.

8. The children talk with each other about their work and often work together. Their learning is often a cooperative project with much talk.

9. All forms in the arts and movement as well as in language--are considered important.

10. Groupings are not based on IQ or reading level, but are kept flexible, shifting with the changing needs and interests of the children.

11. The teacher serves in a supportive role, guiding the children. She is both a sensitive observer of and an active participant in the life of the classroom.

The teacher's role is to guide, support, and help when help is needed. The teacher does not "abdicate the adult role." The teacher adapts her

approach to suit the need. She "conditions" the environment--with materials and activities--rather than making hard and fast lesson plans. The teacher looks for opportunities to present new teaching activities or materials when a child seems motivated or indicates a need. The teacher encourages children to set their own problems and ask questions of their own instead of expecting them to respond to her questions. She allows children to experiment freely and as long as they wish. She encourages the children to help each other, to discuss their work freely with each other, both as an effective means of learning and as a way of developing verbal skills. When a child makes a discovery, the teacher refrains from interpreting it or explaining.

Basically, the teaching/learning strategy is for the child to teach himself in his own way. EDC believes that children learn best when deeply involved in activities interesting to them. Such learning, they say, is self-rewarding; open classrooms require no extrinsic rewards, such as treats, stars, or praise. The developers feel that such motivators are both unnecessary and highly undesirable.

What classroom organization is best suited to this program?

No particular form of classroom organization is required. Project classrooms vary widely.

Flexible scheduling is necessary to the program. While part of the day may be given to scheduled whole-group meetings, most of the time the children should be able to work without rigid time limits. They should be able to move from one activity to another when they wish. Ideally EDC would like them to be able to go outside to play when they wish to do so.

An outstanding characteristic of the British infant school is the "extended classroom." That is, children are not restricted to the classroom itself. Visitors report seeing children working in halls, the cloakroom, the schoolyard. Children may move freely in and out of doors.

Team teaching fits in well with EDC model. In any case, EDC encourages using the talents and skills of all school personnel, including janitors and lunchroom helpers. The janitors, for example, may be highly qualified to help the children with construction work.

As for the physical layout of the classroom, the staff describes it as "informal space that suggests many kinds of activities," with a quiet area, a messy area, a mathematics area, a science area, etc., sometimes blending.

How are students evaluated?

EDC and British infant school writiers emphasize that informal teaching methods require especially good teacher evaluation of each child's progress. Teachers are expected to keep detailed anecdotal records for each child, including notes on health, behavior, interests, and significant remarks, as well as scholastic achievement--a "picture of the whole child."

To guage the child's scholastic achievement, EDC recommends having a check list to consult periodically. EDC provides a paper entitled "Keeping Track of Children's Growth and Learning: Some Guide Lines and Examples for Teachers."

EDC spokesmen have expressed distaste for grading systems, "norms," tracking, and standardized tests which rank children by national percentiles, all of which they feel to be inconsistent with their philosophy of "the maximum growth of each child according to his own potential." They also feel that it creates false values for a child, leads to "fear motivation" for learning, and encourages conformity to the detriment of creativity and individual thought.

PARENT INVOLVEMENT

To what extent are parents involved?

EDC has not developed a program of parent involvement beyond that specified in Follow Through guidelines. That is, EDC Follow Through schools all have a Policy Advisory Committee. The EDC advisors attempt to work with the Committee and, on request, with any parent or parent group. Also, parents are employed as instructional aides. Many advisors have, on request, held seminars for parents. Parents are encouraged to visit classrooms and to serve as resource people.

EDC has prepared a paper entitled "Recommendations for Parent Involvement" for its teachers. It includes suggestions for setting up meetings and for various ways of involving parents. For example, it recommends inviting parents to observe regularly, two or three at a time, and asking parents to make tri-wall furniture, clothes, pillows, puzzles, and the like.

What materials are provided for training parents?

EDC does not provide or recommend special materials for this purpose.

PROFESSIONAL AND PARAPROFESSIONAL TRAINING

What skills or knowledge do teachers require?

Teachers: EDC emphasizes that the open education classroom requires well-trained and confident teachers. Joseph Featherstone states: "These methods mean more work for the teacher, not less." The basic requirement is that the teacher believe in open education and be able to accept a non-instructional role.

In regard to special skills and knowledge, *any* special skills, hobby, or interest of the teacher is an asset and should be put to use. They also feel that a teacher should be alert to any skills (for example, cooking) of her aides or of any other school personnel.

Are training programs available for professionals and paraprofessionals?

There are six to nine workshops at EDC during the school year, and one in summer, averaging about one week each, which both teachers and aides may attend. Advisors also hold workshops at the schools; parents and aides usually may attend as well as teachers.

PROGRAM DEVELOPMENT AND EVALUATION

What is the research base for the program?

In its 1967 report, *Children and Their Primary Schools*, The Central Advisory Council for Education (England) singles out Jean Piaget as the most important influence on the innovative British infant schools. Baldwin, Isaacs, Luria, and Bruner are also mentioned as influences. Earlier the British infant schools were influenced by Rousseau, Pestalozzi, Froebel, Whitehead, Dewey, Montessori, and Rachel Macmillan, "to mention only a few." Froebel was especially influential, according to the report. However, Piaget's observations of the sequence in the development of children's concepts "appear to most educationalists in this country to fit the observed facts of children's learning more satisfactorily" than other theories. However, whereas some followers of Piaget have developed step-by-step, sequenced programs corresponding to his stages of development, the British infant schools derived from Piaget support for a much less programmed and teacher-directed approach to education. Play as the young child's primary means of learning is one of the chief ideas taken from Piaget. Piaget's observations also support the belief that children have a natural urge to explore and discover, that they find pleasure in satisfying it, and that it is therefore self-perpetuating (keeps itself alive).

How was the program developed and tested?

The innovative British infant school approach has evolved and spread over a period of some twenty-five or more years, since approximately the early 1940's, rather than being the product of a careful development-and-testing cycle. In the late 1950's to mid- 1960's a number of national surveys of the infant schools were conducted under government auspices.

What evaluation studies have been conducted?

There is at present no evaluation data available from EDC-sponsored schools. As described in the section immediate preceding, during the 1970-71 year EDC sponsored a study on the role of the advisors and a number of case studies of school systems using their approach.

The British infant schools have undergone a series of evaluation studies. Volume 2 of the 1967 report of the Central Advisory Council for Education (England)--*Children and Their Primary Schools*--reports a great number of surveys, most of them dealing with health, welfare, and family data in relation to education. For example, one survey found that home environment influenced scholastic attainment more than school environment, and especially important was the factor of maternal care. There were no studies comparing the innovative infant schools with traditional ones.

Summary of the Open Education Model of Early Childhood Education

Today's Date _____

Presentation Team _____

Learning Objectives	How are Children Expected to Learn	Role of Teacher	Role of Parents	Assessment

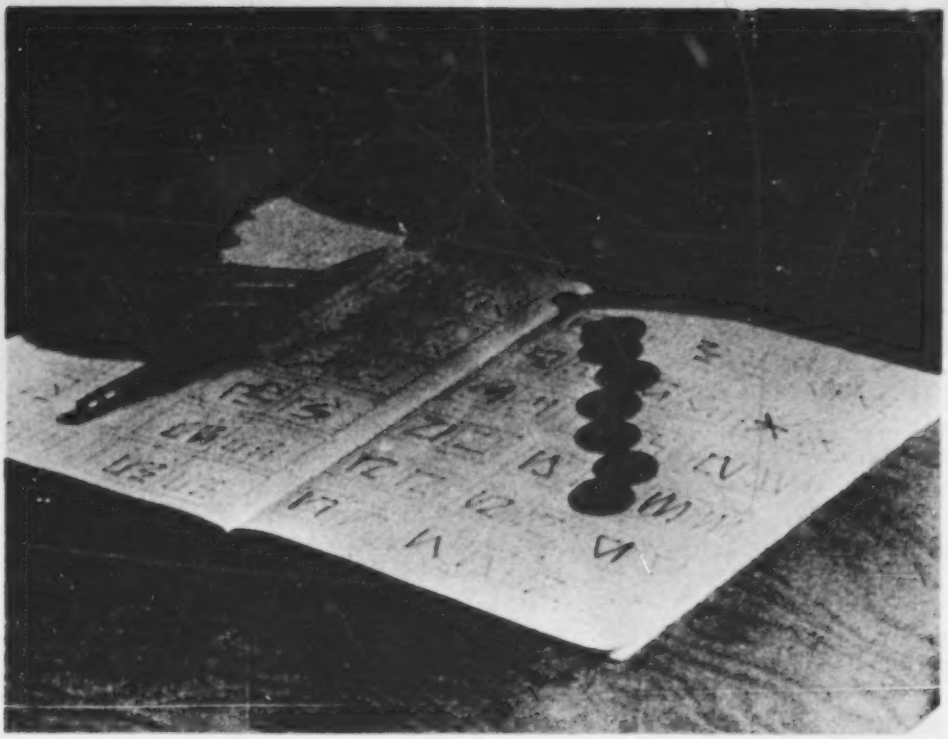
What do I/we think children learn in this Model Program? _____

_____

_____

_____

Session VII



Agenda

Presentation by analysis group

Discussion

Any follow-up activities

Be sure to complete the Summary Sheet to assist you in articulating your personal model at the end of the course.

THE BEHAVIOR ANALYSIS MODEL

Filmstrip Frame No.	Accompanying Commentary
1.	(Title Slide)
2.	(Music)
3.	(Music)
4.	Ok, can anyone read that word for me please? Blister. Very good, Vincent; that's exactly right.
5.	Can anyone read the second word? Sharon? Ladder; very good.
6.	Yes, Roger; would you like to read that word, too?
7.	I like the quiet way Tracy is sitting.
8.	These children are in a behavior analysis classroom. The Behavior Analysis Model is designed to help children in Kindergarten through third grade master skills in reading, arithmetic, writing, and spelling.
9.	The program is based on the belief that failure in the upper grades can be prevented if children learn the fundamentals of academic subjects at an early age.
10.	And, at the same time, learn classroom behaviors such as paying attention, following directions, finishing tasks, and the skills of independent study.
11.	A distinctive feature of the program is the use of rewards. Teachers reward children for good work or desirable behavior by praising them and at the same time awarding a token.
12.	There you are, Nancy; that's very good.
13.	The school day is arranged into learning and activity periods. The children accumulate tokens in the learning periods and spend them during the activity periods.
14.	At each activity period the children have the opportunity to choose how they exchange their accumulated tokens for activities they prefer.
15.	The small groups during the learning period contain children who are working at widely different levels but, with a small group, the teacher or aide can give every child individual attention. She gives tokens on the basis of individual accomplishment.
16.	John receives a token for following directions, but Alice does not because she has already learned this behavior. She will earn tokens

for new accomplishments.

17. The teachers use programed materials in reading, arithmetic, spelling, and handwriting to teach skills in a sequence of small easy steps.

18. In the reading group this kindergarten teacher introduces a cut-and-paste exercise in which the children match words to pictures.

19. An aide teaches arithmetic.

20. A teaching parent teaches writing.

21. And another parent teaches spelling.

22. Undesirable behavior is usually ignored, so the child receives no attention for it. But the teacher points out indirectly what behavior will earn tokens by rewarding children who are behaving correctly.

23. I like the way that Cherry has her pencil on the table where it belongs.

24. However, if the child's behavior is too disruptive the teacher uses a technique called "time-out." The child stays in an isolated corner of the room where he cannot earn tokens for about three minutes. He can return when the timer rings.

25. Soon the first learning period is over. It's time to exchange the tokens. For jumprope...

26. And blocks...

27. And an added special treat for everyone with enough tokens-musical chairs.

28. Then the children return to their learning activities, continuing to earn tokens until the next spending period.

29. The teacher keeps careful records of each child's progress.

30. Continual curriculum-related testing is necessary to diagnose individual needs and plan instruction.

31. The Behavior Analysis Follow Through Model is designed for Kindergarten through grade three. As the children move to each higher grade, they are taught to work more and more independently with the programed materials.

32. Each child has his own individual assignment according to his own pace. He does not have to worry about keeping up with a group.

33. The Model gradually teaches the children to become less dependent on tokens and to enjoy learning for the success it brings them.

34. Schools using the Model use programed workbooks for reading, arithmetic, writing, and spelling. Among recommended programed materials are the Sullivan Programed Reading Workbooks, Sets and Numbers, The SRA Reading Laboratory, Handwriting with Write and See, and Spelling and Writing Patterns.

35. There are two parent aides in every Head Start or Follow Through classroom. They teach handwriting and spelling groups and tutor individual children. There is also a full-time teaching aide responsible for arithmetic groups. She may or may not be a parent.

36. Teachers and regular aides are trained at two centers, located in Lawrence, Kansas, and Philadelphia, Pennsylvania, or in local training and demonstration classrooms in their own districts. There they learn all procedures for testing, keeping records, planning, and using the curriculum. Under supervision, they practice teaching small groups of children. Parent aides are trained locally.

37. The Behavior Analysis Model is used in Head Start and Follow Through classes around the country.

38. For further information, read the program report on the Behavior Analysis Model.

39. This has been a presentation of the Far West Laboratory for Educational Research and Development.

(Beep)

(Beep)

THE BEHAVIOR ANALYSIS MODEL

Project Director: Don Bushell, Jr.

Follow Through, Department of Human Development,
University of Kansas, Lawrence 66044

SUMMARY

The Behavior Analysis Model, developed by Don Bushell, Jr., at the University of Kansas, is an early education program for children from preschool through the third grade.

Bushell feels that failure in later grades can be warded off by teaching children at an early age those skills and behaviors that are required to succeed in school. They include skills in reading, arithmetic, spelling, and handwriting, and desirable classroom behavior such as completing tasks, paying attention, and working independently. To achieve these objectives, the model focuses on a particular approach and prescribes a teaching method which focuses on behavior or performance of children that can be measured. The approach is from a branch of experimental psychology known as the Experimental Analysis of Behavior. The program diagnoses each child's level of functioning (where he is), determines terminal objectives (where he should be), and proceeds to bring him from where he is to where he should be. The distinctive feature of the program, is its use of reinforcement or rewards. Children are rewarded frequently and immediately for small accomplishments. Use of rewards differs from child to child. Free time may be rewarding for one child and a special game for another. Since these rewards cannot be given in the classroom with necessary frequency and immediacy, a substitute token system is used. Tokens are plastic chips, which children earn for good work and desirable behavior. The chips can be exchanged later in the day for rewards each child choses.

The program recommends commercially available programed materials in reading, arithmetic, spelling, and handwriting.

The Behavior Analysis approach is an outgrowth of a research dicipline. Bushell maintains that direct application of the approach in a variety of teaching and training situations has been made and that the effectiveness of the approach has been well documented.

GOALS AND OBJECTIVES

For whom is the program designed?

The Behavior Analysis Model is designed for preschool through third grade. As a Head Start and Follow Through model, it is used with children from

poor homes, many of them belonging to non-white ethnic and cultural groups. As an approach, however, behavior analysis has been successfully used with students at all grade levels and from widely varied backgrounds. (This report is concerned only with the Behavior Analysis approach to Head Start and Follow Through.)

What are the goals and objectives of the program?

The objectives of the program are to teach young children social and academic (learning) skills which will enable them to compete effectively in the public schools, and to train teachers, aides, and parents to use positive reinforcement to develop these skills.

What is the reasoning behind the program?

The developers feel that the idea that young children are not ready for formal instruction has no real support. They believe that young children can learn and should be taught the necessary skills in order to succeed in school. The method adopted to teach these skills is the Behavior Analysis approach, which the developers feel has demonstrated its effectiveness in the laboratory and through direct application in classrooms.

CONTENT AND MATERIALS

How is the program to be used?

The program is designed for use as a complete nine-month, pre-kindergarten through third grade program. The curriculum consists primarily of commercially available materials.

What skills, concepts, and attitudes are to be learned?

Within the broad areas of social and academic skills, the program focuses on skills in reading, methematics, spelling, and handwriting, and a wide range of social skills such as cooperation with peers and adults, decision making, independence, and self-confidence.

How is the curriculum organized?

The curriculum is built around programed materials that:

1. specify the behavior the child will be capable of at the end of the sequence
2. require frequent responding by the child
3. contain clear criteria for a "correct" response
4. allow for individual rates of progress
5. provide for periodic testing of achievement gains

What student materials are provided or suggested?

The developers recommend programed materials because they best meet the five criteria above. Specific materials recommended for kindergarten and first grade in the areas of reading, writing, arithmetic, and spelling are:

Reading: *Behavior Analysis Phonics Primer*, published by the developers; Buchanan and Sullivan Associates, *Programmed Reading*, published by McGraw-Hill; SRA *Reading Laboratory*, published by Science Research Associates. These materials are to be used in the order listed.

Writing: *Behavior Analysis Handwriting Primer;* published by the developers; then *Handwriting With Write and See*, by Skinner and Krarower, published by Lyons and Carnahan.

Arithmetic: *Sets and Numbers* (Grades K-6) by Suppes, published by Singer Co.

Spelling: *Spelling and Writing Patterns*, by Botel, Holsclaw, Cammarota, and Brothers, published by Follette Educational Corp.

What materials are provided or suggested for the teacher?

The following materials are provided for the teacher.

1. An eighteen-minute color film entitled *Behavior Analysis Classroom.* The film discusses the organization of the Behavior Analysis classroom. It is available through the Bureau of Visual Instruction, University of Kansas, Lawrence, Kansas 66044

2. An eight-minute color film entitled *Teaching with Tokens.* The film discusses the use of tokens to reinforce behavior in the classroom. It is available through the Bureau of Visual Instruction, University of Kansas, Lawrence, Kansas 66044.

3. A program booklet entitled *The Behavior Analysis Classroom.* It is available from the developers at the Department of Human Development, University of Kansas, Lawrence, Kansas 66044. This booklet gives a brief description of the program and provides references to other resource materials.

4. A *Token Manual for Behavior Analysis Classroom.* It is available from the developers at the Department of Human Development, University of Kansas, Lawrence, Kansas 66044.

What materials are provided or suggested for student evaluation?

The following student testing materials are suggested:

1. The Behavior Analysis Entry Behavior Inventory. This is an audio-visual inventory of entering verbal and nonverbal behavior. It requires the use of a machine and cards available from Electronic Futures, Inc.

2. "Progress Achievement Test." This test was designed by the developers and based on the Buchanan-Sullivan Programmed Reading materials.

3. Curriculum-embedded tests in the areas of reading, mathematics, spelling, and writing.

CLASSROOM ACTIVITIES

What is the teaching/learning method

The Behavior Analysis approach focuses on the systematic development of social and academic skills. A simplified statement of the steps involved follows.

Establishment of terminal (end) behavior. The first task is "to define in exact terms the behavior which a student must be able to display at the completion of each grade level." This behavior, called terminal behavior, is named in the areas of reading, writing, spelling, arithmetic, and social skills.

Establishment of entry (starting) behavior. The second task is to determine in exact terms the skills each student has when he enters the program. This establishes the beginning point.

Establishment of a system of classroom management. Having established the beginning and ending points along which development is to take place in each skill area, it remains to plan an instructional means to bring each student from where he is to where he should be. The strategy uses reinforcement procedures. Activities which are chosen most often by students are used as reinforcers. Such activities may include free time, attention of the teacher, diet supplements, or opportunity to work with special materials. These activities can keep a high level of motivation if they are properly related to performance. Reinforcers work best when they are presented immediately following the desired behavior. In the classroom reinforcing activities such as those described above are difficult to deliver immediately. For this reason, a token system is used whereby desired behaviors are reinforced immediately with the use of tokens (plastic chips.) When a child faces a new and difficult task, tokens are given for small amounts of progress. Later, when he is close to mastery of the task, fewer tokens are necessary to keep up progress. The student may save tokens and decide when and for what to exchange them. Each activity has a cost. For example, a recess activity might cost twenty tokens, a story, fifteen. Content and prices of the activities are changed often in order to maintain the interest and enthusiasm of the children.

What classroom organization is best suited to this program?

The developers recommend that each class of twenty-five to thirty children be staffed with a lead teacher who is in charge of the class and responsible for small-group mathematics instruction, and two parent aides who concentrate on handwriting, spelling, and individual tutoring lessons. This kind of team arrangement ensures that each child receives frequent personal attention. Early instructional periods are short (ten minutes for three-year-olds). The instructional periods are followed by activity

periods during which the students exchange the tokens they have earned. This pattern is repeated throughout the school day. However, as the year progresses, there is more instructional time per activity period.

How are students evaluated?

Students are continually tested to monitor progress. The following procedures are used for student evaluation:

1. The Behavior Analysis Entry Behavior Inventory is used to determine the skills each child already possesses when he enters the program. The Entry Behavior Inventory consists of ninety-one tasks represented on EFI cards. An EFI card, like a Language Master card by Bell and Howell, is a blank card with an attached audio tape. During the inventory session, the EFI card is placed in an EFI machine, and the audio instructs the student to complete a particular task on the card. The entire inventory tapes the child's knowledge of parts of the body, color, shapes, numbers, relational concepts, rhyming, and general information.

2. A Weekly Individual Progress Report is used to monitor student progress in the areas of reading, writing, spelling, and arithmetic. The report consists of a chart on which the teacher marks the workbook page each child has reached at the end of the week.

3. A Progress Achievement Test, designed by the developers and based on the Buchanan-Sullivan Programmed Reading materials, is used to monitor progress in reading. The test consists of seventeen short test forms.

4. Curriculum-embedded tests in reading, mathematics, writing, and spelling are also used. These are tests included with the recommended programed materials.

PARENT INVOLVEMENT

To what extent are parents involved?

Head Start and Follow Through parents may serve as parent aides in the classroom. There are two parent aides and one full-time teacher aide (who may or may not be a parent) in each classroom.

A parent is first hired as a trainee for six to eight weeks. During that time, he learns to tutor students first individually, then in small groups of two or three.

Parents may participate in the local Policy Advisory Committee. A parent coordinator organizes the program, recruits parents, and coordinates parent participation.

What materials are provided for training parents?

Texts and manuals used in parent training programs include:

A Parent Training Manual for Behavior Analysis Classrooms, available

from the developers.

Living with Children, 1968, by Patterson and Gullion, published by Research Press.

Parents are Teachers, 1970, by W.C. Becker, published by Research Press.

Parents/Children/Discipline: A Positive Approach, 1971, by C. Madsen, published by Allyn and Bacon, Inc.

The materials listed below can also be used for training parents.

A Token Manual for Behavior Analysis Classrooms, available from the developers at the Department of Human Development, University of Kansas, Lawrence, Kansas 66044.

An eight-minute color film entitled *Teaching with Tokens*, available through the Bureau of Visual Instruction, University of Kansas, Lawrence, Kansas 66044.

PROFESSIONAL AND PARAPROFESSIONAL TRAINING

What skills or knowledge do teachers require?

Teachers and teacher aides must be able to teach in the manner required in a Behavior Analysis classroom. For example, they should be able to dispense tokens correctly and use prescribed verbal techniques. They should know how to manage the classroom, do team planning, conduct activity periods, prescribe lessons for tutoring sessions, and solve behavior problems and prescribe lessons for tutoring sessions.

PROGRAM DEVELOPMENT AND EVALUATION

What is the research base for the program?

Behavior Analysis is an applied extension of the branch of experimental psychology known as the "Experimental Analysis of Behavior." Generated by the works of B. F. Skinner and his colleagues, the Experimental Analysis of Behavior has built a large body of research which, since 1964, has been presented through the Journal of the Experimental Analysis of Behavior.

More recently (1968), the Journal of Applied Behavior Analysis has been the vehicle for presentation of research in the analysis of "socially relevant" human behavior. The selected references at the end of this report contain a sample of the materials available which describe the theoretical background and research accomplishments of behavior analysis.

How was the program developed and tested?

Various elements of the program have been developed and analyzed in universities, regional laboratories, and private research settings throughout the country during the past twenty-five years. Much of this research

and development has been supported by grants from the U.S. Office of Education, the National Institute of Mental Health, and the Office of Economic Opportunity.

What evaluation studies have been conducted?

Because behavior analysis is the outgrowth of a research discipline, there are hundreds of published studies which document the effects of applied behavior analysis. The literature cited at the end of this report and the Journal of Applied Analysis describe the accumulating evidence on the effects of classroom behavior analysis procedures. None of these investigations, however, describe the long-term effects of systematic behavior analysis programs for thousands of poor children in neighborhood schools that reflect a variety of cultural and ethnic settings--that is, what the Follow Through program is designed to do.

Summary of Behavior Analysis Model of Early Childhood Education

Today's Date _____

Presentation Team _____

Learning Objectives	How are Children Expected to Learn	Role of Teacher	Role of Parents	Assessment Methods

What do I/we think children learn in this Model Program? _____

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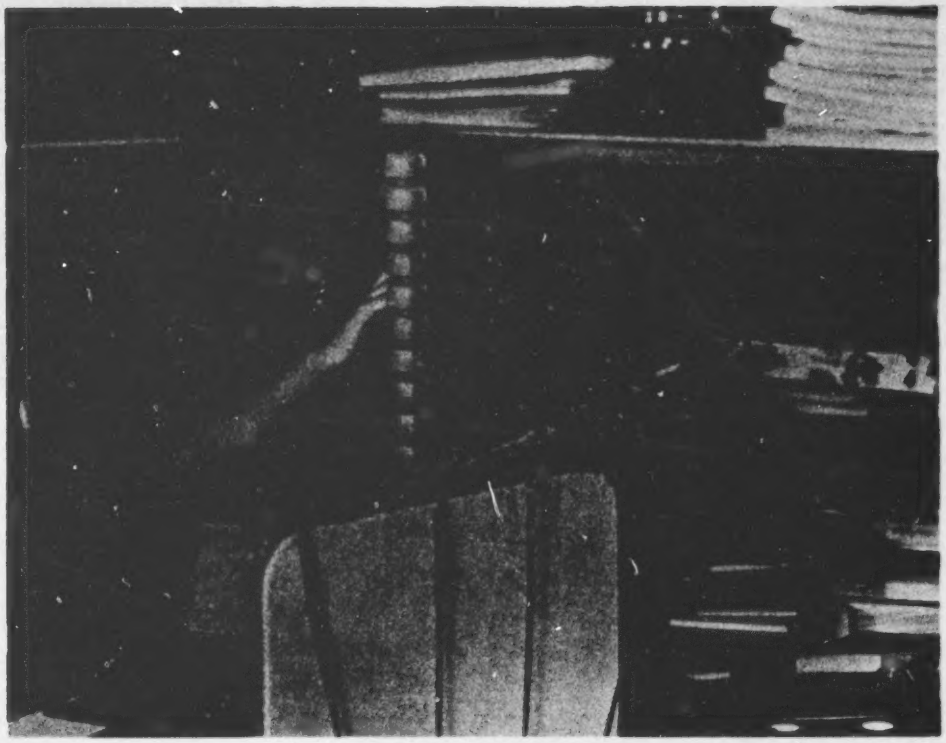
_____

_____

Session VIII



Agenda

Presentation by analysis group

Discussion

Any follow-up activities

Be sure to complete the Summary Sheet to assist you in articulating your personal model at the end of the course.

RESPONSIVE PROGRAM INTRODUCTORY BRIEFING

Filmstrip Frame No.	Accompanying Commentary
1.	(Title Frame)
2.	
3.	(Children talking)
4.	These first graders are in a responsive educational classroom designed to help children to learn how to learn. This means helping children develop self-confidence to tackle problems and the competence to solve a variety of problems.
5.	The classroom is made up of learning centers. These centers contain materials that have been chosen to promote the objective of the program.
6.	The Responsive Model has two major interrelated objectives. The first is to help a child develop a healthy self-concept. He likes himself; he likes his family and his people; and he believes that what he thinks, says, and does makes a difference.
7.	The second major objective is to help a child develop his intellectual abilities. A child expands his intellectual ability through the development of his senses and perception, concept-forming abilities, problem solving skills, and language.
8.	To achieve these objectives, the Responsive Model is based on processes and on an environment that are designed to respond to the learner. (Child: "They're too big to fit!" Teacher: "Well, how can you find out?")
9.	These processes include free choice, free exploration, self-pacing activities, and other activities and learning experiences that are self-correcting and self-rewarding.
10.	In the classroom the child learns from a variety of materials, games, and activities.
11.	Teachers try to respond to children and adapt games and activities to individual interests. (Teacher: Cindy, you enjoy playing with the cubes, but Cathy feels like sitting on my lap.)
12.	Before the children arrive at school the teacher and the assistant plan for the day. They must plan carefully what choices to offer, what centers will be opened, what activities will be available, and what limits to set.

13. Today a new discovery game called "The Pattern Box" is introduced.

14. Children explore "The Pattern Box" and try to discover on their own what comes next. First Karen gets a turn.

15. Then Lisa gets a chance to discover the pattern or the rule. (Child: I'm not sure, but I think it might be a circle.)

16. Another example of responsiveness is this learning booth which uses an electric typewriter. In the learning booth children play a series of problem-solving games.

17. The child is first free to explore the typewriter by pressing the different keys. The booth attendant responds by naming letter or numbers the child types.

18. The child sets his own pace, moving to other activities of searching, matching, and discriminating.

19. Typing words and stories....

20. And playing more difficult problem-solving games.

21. Parents are trained specifically as booth attendant or teaching assistant.

22. A series of inservice training units is available for parents and assistants.

23. The units focus on such specific objectives as observing children's behavior in order to determine individual needs.

24. And assessing children's progress and keeping records.

25. Some of the training units use a film or video tapes.

26. A local program advisor is trained by the developers to interpret and demonstrate the Responsive Model.

27. The Program Advisor conducts frequent classroom demonstrations, makes classroom observations with the teachers and assistants, views and critiques video tapes of classes, and conducts seminars based on material provided by the developers.

28. The Responsive Model-now being implemented across the country-is designed for children in Day Care and preschool programs, as well as for children in the primary grades.

29. The developers also operate an eight-week training course to help parents understand how their children learn.

30. Another part of the Responsive Model is the Parent/Child Toy Lending Library which helps parents become directly involved in teaching their own children.

31. The Toy Library Program can be set up by community groups in a variety of settings. It contains educational toys and games which parents learn how to use and which they may borrow to use with their children at home.

32. Those who wish to install this program may buy written guides and filmstrips. The toys themselves can be made or purchased.

33. For further information, read the Program Report on the Responsive Model.

34. This has been a presentation of the Far West Laboratory for Educational Research and Development.

(Beep)

(Beep)

THE RESPONSIVE MODEL

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SUMMARY

The Responsive Model, a preschool-through-third-grade program, is based on the belief that the development of intellectual abilities and a positive self-image are necessary in preparing children for success in school and later in life.

To achieve these objectives, the developer of the model, Glen Nimnicht of the Far West Laboratory for Educational Research and Development, designed a learning environment that *responds* to the needs and interests of children. Activities in the Responsive Model are undertaken for their own rewards. Children are free to explore activities, work at their own pace, and make discoveries under the guidance of the teaching staff. In addition, children are informed immediately of the results of their actions. For example, toys and materials used in the model have self-correcting features so that the child will know immediately whether he is right or wrong.

The classroom is equipped with a large variety of "responsive" toys and materials. A list of recommended and optional materials is provided by the developer.

Many evaluation studies have been done to measure the success of the model. Some of these studies were by independent school districts using the Responsive Model. Others are conducted by the developer to measure the effectiveness of various aspects of the program. These studies tend to show important differences on measures of intelligence, achievement, and self-concept.

GOALS AND OBJECTIVES

For whom is the program designed?

The Responsive Program was originally designed for three- to nine-year-old children from low-income homes and ethnically different backgrounds. However, the developers believe their general model can be used with most children from three to nine regardless of background and ability.

What are the goals and objectives of the program?

The objectives of the program are to promote the development of intellectual (mental) abilities and of a healthy self-concept. Development in these areas is seen as interdependent, contributing to the welfare of the

total child. These goals are broken down into more specific objectives under the section titled, "Content and Materials."

What is the reasoning behind the program?

The developers maintain that the educational needs of a large number of children, especially those from low-income homes and ethnically different backgrounds, are not met by schools that operate around the concept that all children at a certain age ought to learn the same things and are motivated by the same factors. The developers feel that children learn at different rates and in different ways and, above all, that they learn best when they are interested. The school environment should make provisions for these differences and be responsive to the needs of individual children. This is the approach taken by the developers. (See discussion of the approach of the Responsive Program under Classroom Activities.)

CONTENT AND MATERIALS

How is the program designed to be used?

The final model of the program is designed to be used as a complete nine-month curriculum for children from ages three to nine. The program has several parts: a preschool (Head Start) component, a primary school (Follow Through) component, a Parent/Child Toy Lending Library, and a day care component.

The program is a complete curriculum in the sense that it provides guidelines for planning activites for the entire school day and that it encompasses multiple subject area treatment rather than a single subject area treatment.

What skills, concepts, and attitudes are to be learned?

The skills, concepts, and attitudes to be learned are organized around the two major objectives of the program, development of a healthy self-concept and of basic intellectual abilities. For example, in order for the child to develop a healthy self-concept he needs to develop a number of positive attitudes and values. These include:

a liking for himself and his people
a belief that what he thinks, says, and does makes a difference
a belief that he can be successful in school
a belief that he can solve a variety of problems
a realistic estimate of his own abilities and limitations
feelings of pleasure and enjoyment.

In the area of intellectual development, achievement in the following areas is specified in the context of problem solving.

1. Sensory and perceptual development
2. Language development
3. Concept formation

The developers feel that problem solving is the essence of learning. A child who is developing the ability to solve problems (in all ways) is learning how to learn. Accordingly, the program emphasizes the development of various problem solving skills and methods.

The development of both a healthy self-concept and intellectual abilities is important for problem solving. In many cases, a person will not be able to overcome the affective (emotional) aspects or problems unless he has a healthy self-concept.

How is the curriculum organized?

Instructional units, called learning episodes, are organized to achieve objectives developed in each of the areas described above. For each objective there are a number of learning episodes. The learning episodes make use of specific toys, games, or pieces of equipment.

The episodes are arranged in varying degrees of difficulty and complexity. Learning processes are presented in the order of free exploration, matching, memory, discrimination, and production. However, the developers make it clear that not every child must follow the suggested order, nor must he cover every episode. The reason for this flexibility is that children learn differently. The developers say:

> "In many instances we do not claim to know how the learning of a particular behavior contributes to the future learning ability or achievement of a child. This has sometimes been described as a 'sandpile theory of learning'; that is, we know that it takes a tremendous number of grains of sand to support more sand. But we are not at all certain which grain of sand is necessary to support the next one. And, we are not certain that any particular grain is necessary--others could be substituted and still support the pile."

Implementing this flexibility is a matter for each teacher's judgment, since only the above guidelines are given. Once teachers are familiar with the objectives of the program and the approach used in the Responsive Program to achieve them, they are encouraged to supplement the episodes with ones of their own.

What student materials are provided or suggested?

Almost all of the student materials used in the learning episodes of the program are toys, games, records, blocks, etc., rather than printed materials like workbooks.

A series of eight basic toys, which are uesd in a number of learning episodes, may be obtained from General Learning Corporation. A second series of eight optional toys is also available. A list of toys is given under Professional and Paraprofessional Training. (The developers emphasize that the materials for children are used to best advantage when accompanied by the appropriate training for teachers, assistants, and/or parents.)

What materials are provided or suggested for the teacher?

The developers provide materials to help the teacher (or parent) organize the class and conduct classroom activities (or work with children at home). The materials include outlines of learning episodes, film clips, numerous background articles describing the procedures and approaches used in implementing the Responsive Program, and guides suggesting topics for classroom activites and weekly teacher workshops. (Although these materials make specific suggestions about classroom organization and activities, they emphasize the principle that teachers should be flexible in implementing the program, responding to the needs of the children in their classrooms.)

Materials used in the preschool and Toy Library programs are now published by General Learning Corporation, including a detailed notebook for inservice teacher training, a handbook in the use of toys for teacher assistants, a Toy Library manual for teacher-librarians, two handbooks in the use of toys for parents, two sets of toys, and several films.

What materials are provided or suggested for student testing?

In the research project, a pretest was given at the beginning of the year and a posttest at the end of the year. However, pretesting and posttesting are not requirements.

Individual school districts may administer other standardized tests as part of their evaluation procedures. Results from these tests are often used by the program.

CLASSROOM ACTIVITIES

What is the teaching-learning method?

One of the key features of the program is the use of the principle of responsiveness to guide the selection of materials, games, and activities used in the classroom. A learning environment that responds to children is defined by the developers as follows:

1. It permits the child to explore freely within limits.

   A large portion of the daily time schedule is devoted to individual exploration of materials, toys and games. The child is free to remain with an activity for as long as he wishes, leave it when he has lost interest, or reject the activity at the outset. However, the materials that are available for exploration have been pre-selected by the teacher to foster the development of certain skills, concepts, or attitudes. For example, during a certain week materials that foster the development of classification concepts may be on display and children are given the opportunity to select activities within this constraint. Other constraints of the environment include health, safety, and respect for others' rights.

2. It is self-pacing.

   Children may progress at their own pace. They may choose to repeat an activity or to look ahead. A variety of ways are available to reach the same objective.

3. It informs the child as soon as possible about the consequences of his actions.

   While human beings are the most versatile and important source of feedback, many materials, toys, and games are designed to ensure that they are self-correcting so knowledge of results may be immediate.

4. It encourages the child to make full use of his capacity for discovering concepts, and it guides him to make interrelated discoveries.

   Trial-and-error learning is thought to produce more frustration than insight. Hints or prompts are given to guide the child to make discoveries on his own. The environment is structured so that the learner is likely to make a series of interconnected discoveries about the physical, cultural, or social world.

5. It stresses intrinsic motivation.

   Activities are designed to be self-rewarding, or "autotelic," in that they do not depend on extrinsic rewards and punishments.

What classroom organization is best suited to this program?

The environment is arranged so that the child is likely to make discoveries about his physical, intellectual and social world. This arrangement is based on the notion that a child better remembers what he discovers for himself. Furthermore, the developers believe that problem solving is the essence of learning and it is best learned in an environment that poses problems and encourages the discovery of their solutions.

How are students evaluated?

Some individual school districts administer other standardized tests as part of their own evaluation.

In addition, teachers are encouraged to observe and keep records on individual children. The purpose of these notations is to enable teachers to determine the learning styles, levels of ability in various areas, and life styles of the children, so that they can respond to the needs of each child. The teacher training materials provided by the developers include suggested ways and forms to use in observing children.

Other than observation guides, no classroom or intermediate tests are provided for the teachers to use during the year. However, since the Responsive Program places heavy emphasis upon the use of feedback and on toys and games that are self-corrective, the student frequently gets information about the correctness of his responses.

PARENT INVOLVEMENT

To what extent are parents involved?

The purposes of involving parents in the program are:

1. To support parents' efforts to help their child develop a healthy self-concept and further his intellectual abilities
2. To aid parents in taking part in the decision-making process that affects the education of their children
3. To improve the quality of relationships between parents and the schools

There are two separate programs involving parents. The parent involvement program is focused around weekly or biweekly meetings with parents. These meetings are conducted by local teachers and assistants to accomplish the following:

1. To familiarize parents with the program
2. To recommend ways in which parents can help develop a child's healthy self-concept and foster his intellectual growth
3. To demonstrate the use of toys, games, and other materials (including two learning episodes) that the parents can use with their children at home
4. To receive suggestions and recommendations from parents for improving the program

For parents who do not attend these meetings, the developers recommend that each local Program Advisor organize parent volunteers to visit those parents at home to demonstrate materials for their use with their own children.

Parents may also be involved in the actual instructional program by attending the teacher training sessions and becoming classroom assistants or volunteers.

A separate parent involvement program, the Parent/Child Toy-Lending Library, has been devised for parents of three- and four-year-old children who wish to work one-to-one at home with their children.

PROFESSIONAL TRAINING

What skills or knowledge do professionals require?

In order to use the model effectively, the teacher needs to be familiar with the philosophy of the Responsive Program and the methods used to start the program in the classroom. She needs to be constantly aware of individual children's needs and interests by watching each child work through problem-solving tasks. She then chooses a variety of activities and materials to correspond to these needs. She needs to allow the child to work through a problem and discover the solution for himself. She should demonstrate learning activities by example (playing the game herself in the child's presence) and answer questions the child may have. She needs to avoid "demeaning behavior," that is, behavior that belittles; for example, saying to the class, "It seems that some of us haven't had a good enough upbringing to control ourselves." Similar skills are required of teacher assistants.

PROGRAM DEVELOPMENT AND EVALUATION

What is the research base for the program?

The Responsive Program is an eclectic model, incorporating research and theory from a number of sources. The initial stimulus for the work was the assumption that an educational program should emphasize the enhancement of a healthy self-concept and language and cognitive development. Supporting research included the work of Hunt, Bloom, and Fowler.

A number of other researchers and developers influenced the specific nature of the program of the New Nursery School when it was first founded in 1964. O. K. Moore's "autotelic responsive environment" approach provided the guidelines for general procedures of the program.

The Montessori philosophy that the teacher is an observer and respondent to children's needs has also influenced the program. The use of Montessori's approach is also reflected in the program's emphasis on the use of educational toys designed to accomplish specific ends. Another source of influence has been Martin Deutsch. From the work of Dr. Deutsch, the developers pinpointed specific needs of children which formed the basis of the present objectives: self-concept, language, perceptual acuity, concept formation, and problem-solving.

Summary of the Responsive Model of Early Childhood Education

Today's Date _____

Presentation Team _____

Learning Objectives	How are Children Expected to Learn	Role of Teacher	Role of Parents	Assessment Methods

What do I/we think children learn in this Model Program? _____

_____

_____

_____

Session IX

This is the last session in the learning unit, Introduction to Early Childhood Education. It has been the intention of these workshops to help clarify your personal values regarding early education. You may notice that in the course of the sessions you have identified, indeed created, a personal model that fits your values, skills and understanding.

In the first half of this session you will have the opportunity to consolidate the work you have done over the last eight sessions. The second half of the session will give you a chance to make some plans for applying your new insights and understandings.

Activity I My Personal Model Program

The purpose of this activity is to pull together all the things you have already identified as important to your personal program of early childhood education. This also will give you a chance to go back and review your Summary Sheets from each of the Model presentations.

Take some time to study each summary. Do you have anything new to add? What do the Models have to offer you? After you have finished reviewing summaries select from them anything that you want to include in your "Personal Model of Early Childhood Education." Don't forget to decide on a name for your Model Program and write it at the top of your page with today's date!

You will find an extra copy of the Summary Sheet on the following page. It is for you to fill in later. You can set yourself a date, say, a month or so after you have finished this learning unit to go back and revise the model you have developed here.

Summary of Personal Model of Early Childhood Education: _____

Today's Date _____

Learning Objectives	How are Children Expected to Learn	Role of Teacher	Role of Parents	Assessment Methods

What do I/we think children learn in this Model Program? _____

Summary of Personal Model of Early Childhood Education: _____

Today's Date _____

Learning Objectives	How are Children Expected to Learn	Role of Teacher	Role of Parents	Assessment Methods

What do I/we think children learn in this Model Program? _____

_____

_____

_____

Activity II Sharing Models

Now that you have analyzed a number of Early Childhood Models and have developed your own personal model, how would you answer some "real world" issues:

"Why does my boy finger-paint every day? I thought this was a school!"

"Do they learn anything here, or are they just playing?"

"Don't you think it's terrible for children to have to go to school while they're so young?"

"Parents are really losing control over what their children will learn."

"Is Early Education worth the expense to the taxpayer?"

"I don't care how she feels about herself; I want her to learn to read;"

Can you generate other considerations you have or may encounter in contact with parents, other teachers, administrators or the public? Discuss your questions and respond to them.

What's next?

Now that you have consolidated your learnings from this unit, you should feel pretty satisfied with 1) your competence at analyzing other programs, and 2) your competence at describing your personal model program of early childhood education.

The last half of this session is devoted to activities designed to help you generate ideas for the future.

Activity III Brainstorming

Get together in a group. Choose one of the categories on this page, or make up one on which the group agrees, and "brainstorm" all the answers you can think of. Go around the circle two or three times with each person, as fast as possible, naming whatever idea pops into your head.

It doesn't matter if the answers are silly, or if they are repetitions of something already mentioned by someone else. The point is to say SOMETHING, and FAST. Now relax and have fun.

* how to keep in touch with future professional activities
* how to keep on learning while teaching
* how to share new learnings with others--parents, staff, administrators
* how to make sure not to forget learnings after the workshop has ended.
* how to maintain a high level of creativity
* how to balance personal and professional development
* how to celebrate completion of this workshop
* how to make sure the children in your class gain the benefits of your learnings
* how to keep written records of the future progress of your learning about early childhood education
* how to use this manual in your own way after the class has ended.

The value of "brainstorming" is that it is a tool for generating LOTS of ideas. Think about which of the ideas that your group has suggested you want to carry away to apply your learnings from this unit. You can use this page to take notes on the ones you want to remember and use for yourself.

Activity IV Appreciations

This is the last activity in this learning unit. You have been working together as a group for many hours now and have undoubtedly had some nice things happen along the way. Before breaking up the group get together in a last circle. Think for a few minutes about all the sessions. Remember someone who did something that you appreciated. Now go completely around the circle at least once so that each person has a chance to express appreciation to one other person in the group. Try to use the person's name when you are expressing your appreciation; and if you receive an appreciation, try to use the name when you say thank you.

Now, take a few minutes to reflect on your own learnings from this unit. Think of something you did that was particularly satisfying to you. Go around the circle again so that each person has a chance to express appreciation to her/himself. Let yourself boast. Congratulate yourself on a job well done.

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